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ARABFMAA

Section A

General Accounting
&
financial Management



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Financial & Managerial Accounting Associate

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2024 Edition

FMAA

Preparatory Program

Financial & Managerial Accounting Associate

Brian Hock, CMA, CSCA, CIA, CRMA
and
Lynn Roden, CMA



HOCK *international*, LLC
www.hockinternational.com

(281) 652-5768
support@hockinternational.com

Editorial Notes

This material is designed exclusively to assist people in their exam preparation. No information in the material should be construed as authoritative business, accounting or consulting advice. Appropriate professionals should be consulted for such advice and consulting.

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Table of Contents

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Introduction to the FMAA Certification Exam

The FMAA Exam has five sections in the ICMA's *Learning Outcome Statements*:[1]

A. General Accounting and Financial Management: 25%

B. Financial Statement Preparation and Analysis: 25%

C. Planning and Budgeting: 20%

D. Cost Management and Performance Metrics: 20%

E. Professional Ethics: 10%

The *Learning Outcome Statements* (LOS) for the exam is available to download on the IMA's website at www.imanet.org.

The FMAA exam comprises 80 multiple-choice questions to be completed in a two-hour session. The examination structure is designed to assess a candidate's proficiency in the core areas of accounting and finance.

[1] The *Learning Outcome Statements* are published by the Institute of Certified Management Accountants (ICMA), the examining body for the FMAA exam. The *Learning Outcome Statements* provide in detail the information candidates need to know and things they need to be able to do in order to pass the FMAA exam.

Section A – General Accounting and Financial Management (25%)

Study Unit 1: A.1. Accounting Terminology and Definitions

The Role of Accounting in Business

From investopedia.com, "Accounting is the process of recording financial transactions pertaining to a business. The accounting process includes summarizing, analyzing, and reporting these transactions to oversight agencies, regulators, and tax collection entities. The financial statements used in accounting are a concise summary of financial transactions over an accounting period, summarizing a company's operations, financial position, and cash flows.

"Accounting is one of the key functions of almost any business. It may be handled by a bookkeeper or an accountant at a small firm, or by sizable finance departments with dozens of employees at larger companies. The reports generated by various streams of accounting, such as cost accounting and managerial accounting, are invaluable in helping management make informed business decisions.

"The financial statements that summarize a large company's operations, financial position, and cash flows over a particular period are concise and consolidated reports based on thousands of individual financial transactions. As a result, all professional accounting designations are the culmination of years of study and rigorous examinations combined with a minimum number of years of practical accounting experience."[2]

Management Accounting Compared to Financial Accounting

Financial accounting is used to measure the financial performance of an organization using **generally accepted accounting principles (GAAP)** to keep the records and prepare financial statements that report the financial position and operations of the entity on a regular periodic basis. Financial statements are used by external stakeholders, such as owners, stockholders, lenders, suppliers, and governmental entities including the Securities and Exchange Commission (SEC) and the Internal Revenue Service (IRS). Financial accounting is primarily concerned with historical reporting.

> **Note**: **Generally accepted accounting principles** are the accounting concepts, measurement techniques, and standards for presentation that are used in the preparation of financial statements. In the U.S., generally accepted accounting principles are established by the Financial Accounting Standards Board (FASB). The FASB promulgates accounting standards in its *Accounting Standards Codification®* available on its website at www.fasb.org.

Management accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by internal decision makers in order to plan, evaluate, and control an entity and to assure appropriate use of and accountability for its resources.

Management accounting has a much larger scope because it includes many things that are not connected to the financial statements of the company. Management accounting is for internal use and looks at accounting information from the perspective of those who use it in strategic planning, budgeting, capital budgeting, pricing, controlling operations, determining production costs, internal controls, analysis, decision making, and providing information to support decisions made throughout the organization.

Management accounting uses both financial and non-financial information. Since the information is used internally, it does not always need to conform to generally accepted accounting principles and is not subject to the same financial oversight that an organization's financial accounting is. However, financial accounting is the foundation for understanding management accounting.

[2] Fernando, Jason, "Accounting Explained With Brief History and Modern Job Requirements," Investopedia, https://www.investopedia.com/terms/a/accounting.asp, 2023, accessed November 17, 2023.

Types of Business Enterprises

Companies can have many different structures and legal forms. The legal form of a business determines things like how it is taxed, whether the company itself can enter into contracts and what type of activities it can undertake. The most common types of business enterprises are listed here with a brief description of the type of enterprise.

Sole Proprietorship

From investopedia.com, "A sole proprietorship is an unincorporated business that has just one owner who pays personal income tax on profits earned from the business. Many sole proprietors do business under their own names because creating a separate business or trade name isn't necessary.

"Also referred to as a sole trader or a proprietorship, a sole proprietorship is the easiest type of business to establish or take apart, due to a lack of government regulation. As such, they are very popular among sole owners of businesses, individual self-contractors, and consultants. Most small businesses start as sole proprietorships and either stay that way or expand and transition to a limited liability entity or corporation."[3]

Corporation

From investopedia.com, "A corporation is a legal entity that is separate and distinct from its owners. Under the law, corporations possess many of the same rights and responsibilities as individuals. They can enter contracts, loan and borrow money, sue and be sued, hire employees, own assets, and pay taxes.

"A corporation's distinguishing characteristic is limited liability. Shareholders profit through dividends and stock appreciation but are not personally liable for the company's debts."[4]

Private Company

From investopedia.com, "A private company is a firm held under private ownership. Private companies may issue stock and have shareholders, but their shares do not trade on public exchanges and are not issued through an initial public offering (IPO). As a result, private firms do not need to meet the Securities and Exchange Commission's (SEC) strict filing requirements for public companies. In general, the shares of these businesses are less liquid, and their valuations are more difficult to determine."[5]

Public Company

From investopedia.com, "A public company is a corporation whose shareholders have a claim to part of the company's assets and profits. It's also called a publicly traded company. This type of company is called a public limited company (PLC) in the United Kingdom. Ownership of a public company is distributed among general public shareholders through the free trade of shares of stock on stock exchanges or over-the-counter (OTC) markets."[6]

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[3] Twin, Alexandra, "Sole Proprietorship: What It Is, Pros & Cons, and Differences From an LLC," Investopedia, https://www.investopedia.com/terms/s/soleproprietorship.asp, 2023, Accessed November 17, 2023.

[4] The Investopedia Team, "Corporation: What It Is and How to Form One," Investopedia, https://www.investopedia.com/terms/c/corporation.asp, 2023, Accessed November 17, 2023.

[5] Chen, James, "Private Company: What It Is, Types, and Pros and Cons," Investopedia, https://www.investopedia.com/terms/p/privatecompany.asp, 2022, Accessed November 17, 2023.

[6] Banton, Caroline, "Publicly Traded Company: Definition, How It Works, and Examples," Investopedia, https://www.investopedia.com/terms/p/publiccompany.asp, 2023, Accessed November 17, 2023.

Partnership

From investopedia.com, "A partnership is a formal arrangement by two or more parties to manage and operate a business and share its profits.

"There are several types of partnership arrangements. In particular, in a partnership business, all partners share liabilities and profits equally, while in others, partners may have limited liability. There also is the so-called 'silent partner,' in which the silent partner is not involved in the day-to-day operations of the business."[7]

Joint Venture

From investopedia.com, "A strategic joint venture is a business agreement between two companies that make the active decision to work together, with a collective aim of achieving a specific set of goals and increasing each company's bottom line.

"Through this arrangement, the companies effectively complement one another's strengths, while compensating for one another's weaknesses. Both companies share in the returns of the joint venture, while equally absorbing the potential risks involved. Strategic joint ventures may be seen as strategic alliances, though the latter may or may not entail a binding legal agreement, while the former does.

"Unlike mergers and acquisitions, strategic joint ventures do not necessarily have to be permanent partnerships. Furthermore, both companies maintain their independence and retain their identities as individual companies, thus allowing each one to pursue business models outside the partnership mandate."[8]

Nonprofit Organization

From investopedia.com, "A nonprofit organization is a business that has been granted tax-exempt status by the Internal Revenue Service (IRS) because it furthers a social cause and provides a public benefit. Donations made to a nonprofit organization are typically tax-deductible to individuals and businesses that make them, and the nonprofit itself pays no tax on the received donations or on any other money earned through fundraising activities."[9]

Note: The above definition refers to the IRS in the United States as the body that determines if a company is classified as non-profit. In each country there will be a specific governmental organization that makes this decision.

[7] Kopp, Carol M., "Partnership: Definition, How It Works, Taxation, and Types," Investopedia, https://www.investopedia.com/terms/p/partnership.asp, 2023, Accessed November 17, 2023.

[8] Kenton, Will, "Strategic Joint Venture: What it is, How it Works," Investopedia, https://www.investopedia.com/terms/s/strategic-joint-venture.asp, 2023, Accessed November 17, 2023.

[9] Kenton, Will, "Nonprofit Organization (NPO): Definition and Example," Investopedia, https://www.investopedia.com/terms/n/non-profitorganization.asp, 2023, Accessed November 17, 2023.

Accounting Principles

Cash Versus Accrual Basis of Accounting

Financial statements may be prepared on either the cash basis or the accrual basis. A major difference between accrual accounting and accounting based on cash receipts and outlays is the timing of recognition of revenues, expenses, gains, and losses.

- When the **cash basis of accounting** is used, revenues and gains are recognized when cash is received; and expenses and losses are recognized when cash is paid.
- When the **accrual basis of accounting** is used, revenues and gains are recognized in the period when the performance obligation to the customer is satisfied and the customer obtains control of the asset. Expenses and losses are recognized when the revenues for which they were incurred are recognized, called the **matching principle.** Or, if the expenses cannot be directly related to the production of revenues, the expenses are recognized when the good or service is received and liability for payment is incurred.

To be meaningful, revenue must be recognized only when the performance obligation to the customer has been satisfied and the customer has obtained control of the asset, and an expense must be recognized when a liability is incurred in the process of providing goods or services to customers. Therefore, Generally Accepted Accounting Principles (GAAP) require the use of the accrual basis for accounting. The accrual basis will be explained and used in examples throughout these study materials.

Conservatism

Note: The principle of conservatism is included here because it is a traditional concept in accounting practice, even though it is no longer recommended by the FASB. According to the FASB's current Concepts Statement No. 8, Chapter 3, *Qualitative Characteristics of Useful Financial Information* as amended August 2018, Paragraphs BC3.27-29, in "Appendix: Basis for Conclusions for Chapter 3," conservatism is stated by the FASB to be a potential cause of bias in financial reporting and is not recommended. Nevertheless, the ICMA has stated that they consider it to be a noteworthy concept, particularly in revenue recognition.

Conservatism is an accounting concept that states that revenues are recognized only when they are reasonably certain, but expenses are recognized when they are probable. It is a prudent reaction to uncertainty to try to ensure that uncertainty and risks inherent in business situations are adequately considered.

In other words, conservatism means that accountants will prefer to be cautious in the presentations. An example of this is that losses are recognized as soon as it becomes apparent that a loss may occur, while gains are recognized only after the transaction has happened and the gain has been realized.

Consistency

Consistency means the use of the same methods for the same items, either from period to period within a reporting entity or in a single period across entities.[10] This means that the same policies and procedures should be used from year to year. Any differences that arise in financial information between periods should be the result of different transactions occurring and not because of a change in the way that the same transaction is accounted for.

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[10] FASB Statement of Financial Accounting Concepts No. 8, *Conceptual Framework for Financial Reporting—Chapter 3, Qualitative Characteristics of Useful Financial Information* (Amended 08/2018), Paragraph QC22, p. 5.

Expense Recognition

The expense recognition principle, or the **matching principle**, states that recognition of expenses is related to net changes in assets and the earning of revenues. Expenses should be recognized when the work or product contributes to revenue.

Matching revenue and expense is the process of recognizing expenses in the same accounting period as that in which the related revenues are recognized. An expense should be recognized when a liability is incurred in the process of providing goods or services to customers and when the revenue for which the expense was incurred is recognized.

However, many expenses are not related directly to specific revenues but can be related to a period on the basis of transactions or events occurring in that period or by allocation. Such methods of expense recognition are also valid.

Accruals/Deferrals

An accrual is an accumulation of revenue that is due but has not been received or a cost that has been incurred but has not been paid by an entity during the accounting period.

A deferral is an asset or liability that represents a revenue or expense that will not be recognized as a revenue or expense until a future date.

- Deferred expenses, also called deferred charges, are expenditures not recognized in the period in which they were made. They are carried forward as assets that will become expenses in future periods.
- Deferred revenues are revenues received or recorded but not yet earned. Deferred revenues are liabilities because they represent an obligation to provide the good or service for which they have been paid.

Depreciation/Amortization

Depreciation is the accounting process of allocating the cost of tangible assets to operations over periods benefited (generally the expected life of the asset).

Amortization is the accounting process of allocating costs to the time periods during which such costs are consumed. Amortization is also the name of the process of allocating the costs of intangible assets to the periods in which the intangible asset will provide benefit to the company.

Accounting Terminology

A **business transaction** that needs to be recorded in the accounting records is a business event that (1) takes place on behalf of the business, (2) occurs between the business and another party, (3) can be expressed in monetary terms, and (4) affects the financial information presented in the organization's financial statements. Financial transactions are based on supporting documentation, called **source documents**, which serve as evidence that the event being recorded took place. For example, a sale of an asset is recorded in the accounting system when there is evidence that the buyer has received control of the asset. If the asset is land, the source document is the evidence of the transfer of title.

Recordkeeping is the process of recording business transactions and events in the accounting system. Recordkeeping is the foundation of accounting.

An **accounting period** is an established period of time during which business transactions take place and are recorded in the accounting system, accounting functions are performed, and for which the recorded transactions are aggregated, summarized, analyzed, and reported. An accounting period can be a month, a quarter, a year, or any other established time period that is used for analyzing a company's performance.

At the end of an accounting period, **closing entries** are recorded, the transactions are summarized, and financial statements are prepared to report the summarized information.

> **Note**: Closing entries are used to transfer temporary income statement account balances to the retained earnings account in the year-end close. That process will be explained later in this textbook.

Financial statements are reports that summarize the business transactions that took place during the accounting period. They show the financial position of the business as of the report date and the operating results by which it arrived at that financial position. Financial statements are prepared according to established accounting standards.

The accounting concepts used, the measurement methods used, and the standards of presentation used in the presentation of the financial statements are called **generally accepted accounting principles,** or known as **GAAP**. Generally accepted accounting standards are set by organizations authorized to establish them within their areas of jurisdiction, and they must be used consistently. In the U.S., accounting standards are set by the Financial Accounting Standards Board (FASB). International accounting standards, called International Financial Reporting Standards (IFRS), are set by the International Accounting Standards Board (IASB).

The development of accounting information in conformity with generally accepted accounting principles and reporting to external users on the financial position and operations of the company is **financial accounting**.

A **full set of financial statements** presents the **elements** of financial statements. The elements of financial statements are assets, liabilities, equity, comprehensive income including revenues, expenses, gains, and losses during the period, and investments by and distributions to owners.

The **balance sheet**, also called the **statement of financial position**, shows the financial position of the business as of a specific date. It is a listing of the **assets**, **liabilities**, and **equity** of the business and their balances as of that specific date. The header of a balance sheet shows the name of the company, the name of the financial statement and the statement date.

The **income statement** presents the results of operations during the current period. The income statement reports revenues and gains minus expenses and losses and shows the difference as net income, also called profit and loss, for the period. The header of an income statement shows the name of the company, the name of the financial statement, and the period covered by the statement.

Cash flow is not the same as net income. Cash flow is the sum of cash receipts less the sum of cash expenditures during a period of time. It includes cash from operating activities, cash from investing activities, and cash from financing activities. Because accrual accounting involves recognizing revenues when they are earned and expenses when they are incurred, regardless of when the cash is received or paid, an income statement does not provide information on how much cash was received and how much cash was paid out, and for what, during a reporting period. Cash flow and its sources and uses are reported on a **statement of cash flows** that is part of a full set of financial statements. The statement of cash flows provides information regarding cash receipts and cash payments made by the company during a reporting period.

Assets are present rights of an entity to an economic benefit, or "what is owned."

> Note: An **entity** is a person or an organization that possesses separate and distinct legal rights, such as a sole proprietorship, a partnership, a corporation, a governmental unit, or an association. An entity can operate legally, own property, engage in business, enter into contracts, pay taxes, and sue and be sued. An entity can make decisions through its agents, for example officers of a corporation, a government, or an association. In accounting, a **reporting entity** is an entity that provides financial statements.

Liabilities are present obligations of an entity to transfer or otherwise provide an economic benefit or benefits to others, or "what is owed."

Equity, also called **owners' equity**, represents the ownership interest in a business entity. It is the portion of the company's assets owned by and owed to the owners. Equity is the reporting entity's net assets, that is, the residual (remaining) interest in the assets of the entity after deducting its liabilities from its assets. Equity is increased by investments by owners and by revenues and gains. Equity is decreased by expenses and losses and by distributions to owners, usually in the form of dividends.

Revenues are inflows or other enhancements of assets or settlements of liabilities (or a combination of both) that result from delivering or producing goods, rendering services, or other activities.

Expenses are outflows or other using-up of assets or the incurrence of liabilities (or a combination of both) that result from delivering or producing goods, providing services, or carrying out other activities.

Gains are increases in equity resulting from transactions and other events and circumstances affecting an entity other than those that result from revenues or investments by owners.

Losses are decreases in equity that result from transactions and other events and circumstances affecting an entity other than for those that result from expenses or distributions to owners.

Ledger accounts, or simply "accounts," are established within the accounting system to be used for classifying accounting entries. Ledger accounts in an accounting system are identified by a name and usually by an account number. They are a means to accumulate information about changes in specific assets, liabilities, and elements of equity. "Elements of equity" include investments by owners (which increase equity); distributions to owners (which decrease equity); and revenues, gains, expenses, and losses. Revenues and gains increase equity while expenses and losses decrease equity.

The **ledger** is the full group of ledger accounts containing all the financial transactions that have taken place and been recorded.

Ledger accounts are classified as asset, liability, equity, revenue, gain, expense, and loss accounts. Ledger accounts are also classified as **permanent accounts** or **temporary accounts**.

Permanent accounts are accounts whose balances continue to increase and decrease with each entry[11] affecting them, from accounting period to accounting period, and they are never reset to zero. Asset accounts, liability accounts, and equity accounts other than the Dividends account12 are all permanent accounts. Permanent accounts are represented on the balance sheet.

Temporary accounts are closed at the end of each accounting period, usually a fiscal year. Revenue accounts, gain accounts, expense accounts, and loss accounts reported on the income statement are all temporary accounts.

At the end of each accounting period, the temporary account balances are transferred to the **Retained Earnings account**, a permanent account in the equity section of the balance sheet.

Temporary accounts also include the Dividends account, a contra-equity account, which contains dividends declared during the accounting period, and the Income Summary account, which is used primarily with manual accounting systems and then only during closing activities at the end of each accounting period.[13]

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[11] An **entry**, or an **accounting entry**, is a record that documents a transaction.

[12] Dividends declared reduce equity because they reduce Retained Earnings in equity. Dividends declared may be recorded by debiting a temporary account in equity called Dividends that is closed out to equity in the year-end close, or they may be recorded by debiting (reducing) Retained Earnings directly.

[13] The Income Summary account is used primarily with a manual accounting system, as a clearing account during the closing process. It is usually not used in an automated accounting information system because it is not necessary.

Note: A **contra account** is a ledger account that reduces the value of another account when the accounts are netted. A contra account carries a balance that is the opposite of the balance of the account it is associated with and also the opposite of the normal balance for the type of account it is. The declaration of a dividend reduces the value of equity, specifically the value of the Retained Earnings account.

The temporary Dividends account is closed to the Retained Earnings account in the year-end close. The declaration of a dividend is debited to the Dividends account, a contra-equity account that reduces the value of the Retained Earnings account.

Note: **Retained earnings** are the accumulated net income the company has earned since it began operations, minus the distributions that have been paid to owners since the company began operations. It is the amount of net income that has not been paid out to owners and is available to be reinvested in the company.

The **Retained Earnings account** is a ledger account in the equity section of the balance sheet. It is increased by net income earned and decreased by distributions paid to owners, usually in the form of dividends.

Transferring the temporary account balances to the Retained Earnings account resets their balances to zero in preparation for the next accounting period. Thus, **temporary accounts** can also be called **temporary equity accounts** because they report the detail that is transferred to retained earnings at the end of each accounting period.

Note: A **fiscal year** is any 12-month period selected by a company for reporting its financial information. A company's fiscal year may be the same as the calendar year, that is, from January 1 to December 31; but it may also be a one-year period with any consistent ending date. When a new business first begins operating, its management may choose a fiscal year-end date that is less than one year in the future; so, its first fiscal year financial statements may be for a period of less than a full year.

Financial statements can be issued for periods of less than a year, such as at the end of each month, at the end of each quarter prior to the fiscal year end, or at the end of the first six months and then at the fiscal year end. Financial statements covering periods of less than a fiscal year are called **interim financial statements**.

Study Unit 2: A.2. Recording Business Transactions

Introduction to Bookkeeping

Bookkeeping is the process of recording financial events in an accounting system. Many organizations have hundreds or thousands of financial events every day, and each one needs to be recorded in the accounting system as a transaction.

Double-entry bookkeeping is the basis for all accounting. A double-entry bookkeeping system is called "double-entry" because it involves entering financial transactions that change the balances of at least two ledger accounts. The double-entry system is used to maintain the balance in the accounting equation. The accounting equation is:

Assets = Liabilities + Equity

The accounting equation must always balance because the amounts on the two sides of the equals sign are **two views of the same position.** Assets show what resources the business owns, whereas liabilities and equity show the sources of the resources supplied to the business.

Double-entry bookkeeping maintains the balance in the accounting equation because the total or net of entries posted[14] to accounts that affect the left side of the equals sign in the formula (assets) must always equal the total or net of entries posted to accounts that affect the right side of the equals sign (liabilities and equity). If every transaction recorded in the accounting system meets that requirement, the accounting equation will remain in balance.

The Difference Between Bookkeeping and Accounting

Bookkeeping is the recording of transactions in the accounting system. It consists of the early steps in the accounting cycle that culminates in the preparation of a full set of financial statements for a fiscal year and closing the temporary accounts to retained earnings so the temporary accounts will begin the next fiscal year with zero balances.

Accounting involves the design of accounting systems; the preparation of financial statements; auditing; development of cost studies, forecasts, and other analytical work; income tax work; and analysis and interpretation of accounting information to provide support for business decisions. However, an understanding of the process of **double-entry bookkeeping** is basic to an understanding of accounting and the ability to perform the duties of an accountant.

Most organizations use an **automated accounting information system** (AIS), and many of them require very little knowledge of double-entry bookkeeping because the system automatically creates the accounting entries. However, an understanding of manual bookkeeping is necessary to understand what an automated accounting information system is supposed to do. Since knowledge of a manual accounting system can be easily transferred to any automated accounting information system, a manual system is what will be explained in these study materials, with a few references to ways in which the process may be slightly different in an automated accounting information system.

Recording Changes in Financial Condition

Every financial transaction recorded in a double-entry system must affect at least two ledger accounts. For example, a recorded transaction may do any of the following, although transactions are not limited to these examples.

[14] To **post** a transaction is to record it in the proper ledger account.

1) A recorded transaction may increase one asset account balance and decrease another asset account balance by the same amount, resulting in no change in total assets and no change in liabilities or equity, so the accounting equation remains in balance.

> **Example**: A piece of equipment is purchased for $10,000 cash. Equipment is an asset and so is cash. Equipment is increased by $10,000 and cash is decreased by the $10,000 paid for the equipment, so total assets remain unchanged.

2) A recorded transaction may increase one liability account balance and decrease another liability account balance by the same amount, resulting in no change in total liabilities and no change in assets or equity, so the accounting equation remains in balance.

> **Example**: A company has a short-term loan for $15,000 that is maturing. The company borrows $15,000 on a long-term loan and uses the proceeds to pay off the $15,000 maturing balance of the short-term loan. Short-term and long-term loans are both liabilities. Short-term liabilities are decreased by $15,000 to reflect the amount paid off in the transaction, and long-term liabilities are increased by the $15,000 due to the lender for the new, long-term loan. Total liabilities remain unchanged.

3) A recorded transaction may decrease a liability account balance and decrease an asset account balance by the same amount, resulting in equal decreases in total assets and total liabilities and no change in equity, so the accounting equation remains in balance.

> **Example**: $20,000 in cash is used to pay off a $20,000 short-term loan that is maturing. The loan is a liability, and the liability is decreased by $20,000. Cash is an asset, and cash is also decreased by $20,000. As a result, total assets decrease by $20,000 and total liabilities decrease by $20,000.

4) A recorded transaction may increase an asset account balance and increase an equity account by the same amount, resulting in equal increases in total assets and total equity and no change in liabilities, so the accounting equation remains in balance.

> **Example**: Common stock is sold to investors for $50,000 in cash. Cash, an asset, is increased by $50,000 while accounts in owners' equity are increased by $50,000, resulting in an increase of $50,000 in total assets and an increase of $50,000 in total equity.

Note that in each of the examples, the amount of change in accounts classified as assets equals the amount of change in accounts classified as liabilities or equity.

If a recorded transaction increases one asset account balance and decreases another asset account balance by the same amount, resulting in no change in total assets, as in number 1 above, it should also create no change in either total liabilities or total equity. And if a recorded transaction increases one liability account balance and decreases another liability account balance by the same amount, resulting in no change in total liabilities as in number 2 above, it should also create no change in total assets or total equity.

The Chart of Accounts

The **Chart of Accounts** is a list of all the ledger accounts available for recording transactions. Ledger accounts are a means of accumulating information on financial transactions according to account. Most accounting systems use names and account numbers to identify the accounts in the system. Account numbers can consist of any number of digits, but the first digit usually signifies the type of account. The most frequently used first digits for assets, liabilities, and equity are:

Assets	1
Liabilities	2
Equity	3
Revenues and gains	4
Expenses and losses	5

Usually, the subsequent digits are used to identify sub-classifications of accounts. For example, among asset accounts, all Cash accounts may begin with 11, accounts receivable accounts begin with 12, inventory accounts begin with 13, current investment accounts begin with 14, other current asset accounts begin with 15, non-current investment accounts begin with 16, fixed asset accounts begin with 17, and other non-current asset accounts begin with 18.

The third position in the account number can be used to further classify accounts. For example, within the fixed assets group beginning with 17, 171 may be used for land, 172 for buildings, and 173 for furniture and equipment. Additional subsequent numbers can be used for further classification. Account numbers can also contain function codes and responsibility center codes so that items recorded in the accounts can be classified and summarized for additional analysis.

The General Ledger

The **general ledger** is the full group of ledger accounts containing all the financial transactions that have taken place and been recorded. The general ledger includes all the ledger accounts and all the transaction data needed to produce the financial statements for the period.

When an automated accounting information system is used for bookkeeping and accounting, one of the reports that can be printed from the system is called a **general ledger report**.

A general ledger report is organized according to ledger account. The report shows the ledger account numbers and account names, the beginning and ending balances in each account, and the descriptions and amounts for the transactions recorded in each account in chronological order for the period beginning with the start date and ending with the ending date specified by the user. It can include all transactions recorded in all accounts in the general ledger for that specific period, or it can include transactions recorded in only certain accounts as specified by the user.

A general ledger report is mainly used to investigate transactions. It can be used to locate errors or fraudulent transactions or simply to research what items make up the balance in an account, for example to research the specific costs that have gone into creating an expense account's balance.

The same information is available in a manual system by reviewing the postings in specific ledger accounts for the period in question.

Debits and Credits

When a ledger account's balance is either increased or decreased, the increase or decrease is called either a **debit** or a **credit**. "Debit" and "credit" are names used to indicate whether a given account is being increased or decreased. The process of recording a debit to an account is called **debiting** the account, and the process of recording a credit to an account is called **crediting** the account.

"Debit" does not mean negative, and "credit" does not mean positive; that is, credits do not always increase an account's balance and debits do not always decrease an account's balance. Whether a debit or a credit increases or decreases a ledger account's balance depends on the type of account.

- A debit increases an asset account's balance.
- A credit decreases an asset account's balance.
- A credit increases a liability or equity account's balance.
- A debit decreases a liability or equity account's balance.

Note:

A debit **increases an asset** account's balance, but a debit **decreases a liability or equity** account's balance.

A credit **decreases an asset** account's balance, but a credit **increases a liability or equity** account's balance.

To look at it another way:

Asset accounts are **increased by debits** and **decreased by credits**.

Liability and **equity** accounts are **increased by credits** and **decreased by debits**.

The following is a summary of debits and credits and their effects on the balances of asset, liability, and equity accounts:

	Effect on the Account Balance	
Type of account	**of Debits**	**of Credits**
Asset accounts	Increase	Decrease
Liability accounts	Decrease	Increase
Equity accounts	Decrease	Increase

In bookkeeping and accounting, "debit" is abbreviated as "Dr" and "credit" is abbreviated as "Cr."

Note: The words "debit" and "credit" function as nouns, verbs, and adjectives.

- A debit [noun] debits [verb] an account balance; and if the debits to the account balance exceed the credits to the account balance, the balance is a debit [adjective] balance.
- A credit [noun] credits [verb] an account balance; and if the credits to the account balance exceed the debits to the account balance, the balance is a credit [adjective] balance.

Returning to the four examples of the types of transactions that may be recorded, the words "debit" and "credit" have been added to the descriptions of the transactions:

1) A recorded transaction may **debit** (increase) one asset account balance and **credit** (decrease) another asset account balance by the same amount, resulting in no change in total assets and no change in liabilities or equity, so the accounting equation remains in balance.

> **Example**: A piece of equipment is purchased for $10,000 cash. Equipment is an asset and so is cash. Equipment is **debited** for $10,000 to increase it, and cash is **credited** for $10,000 to decrease it by the amount paid for the equipment, so total assets remain unchanged.

2) A recorded transaction may **credit** (increase) one liability account balance and **debit** (decrease) another liability account balance by the same amount, resulting in no change in total liabilities and no change in assets or equity, so the accounting equation remains in balance.

> **Example**: A company has a short-term loan for $15,000 that is maturing. The company borrows $15,000 on a long-term loan and uses the proceeds to pay off the $15,000 maturing balance of the short-term loan. Short-term and long-term loans are both liabilities. Short-term liabilities are **debited** for $15,000 to reduce them by the amount paid off in the transaction, and long-term liabilities are **credited** to increase them by the $15,000 due to the lender for the new, long-term loan. Total liabilities remain unchanged.

3) A recorded transaction may **debit** (decrease) a liability account balance and **credit** (decrease) an asset account balance by the same amount, resulting in equal decreases in total assets and total liabilities and no change in equity, so the accounting equation remains in balance.

> **Example**: $20,000 in cash is used to pay off a $20,000 short-term loan that is maturing. The loan is a liability, and the liability is **debited** for $20,000 to decrease it. Cash is an asset, and cash is **credited** for $20,000 to decrease it. As a result, total assets decrease by $20,000 and total liabilities decrease by $20,000.

4) A recorded transaction may **debit** (increase) an asset account balance and **credit** (increase) an equity account or accounts by the same amount, resulting in equal increases in total assets and total equity and no change in liabilities, so the accounting equation remains in balance.

> **Example**: Common stock is sold to investors for $50,000 in cash. Cash, an asset, is **debited** for $50,000 to increase it while common stock, which is owners' equity, is **credited** for $50,000 to increase it, resulting in an increase of $50,000 in total assets and an increase of $50,000 in total equity.

Notice that the debit and the credit in each transaction **are equal**. Because the debit and the credit in each transaction are equal, the accounting equation, **Assets = Liabilities + Equity**, remains in balance.

> **Note**: Every transaction posted must contain adjustments to the balances of at least two accounts. In every transaction, **the debit(s) must always equal the credit(s)**.
>
> The total debits and total credits must be equal so that the accounting equation, **Assets = Liabilities + Equity**, will remain in balance.

Normal Account Balances

The normal account balances for asset, liability, and equity accounts match the type of entry—debit or credit—that increases the account balance for each. They are as follows.

Type of Account	Normal Account Balance	Accomplished by Means of
Asset accounts	Debit	Debits to account > credits
Liability accounts	Credit	Credits to account > debits
Equity accounts	Credit	Credits to account > debits

A few accounts classified as assets normally carry credit balances instead of the usual debit balances, and a few liability or equity accounts normally carry debit balances instead of the usual credit balances. An account like that is called a **contra account**, because it carries a balance that is the opposite of the normal balance for the type of account that it is. A contra account functions as a valuation account that decreases the value of another account when the balances in the two accounts are combined. Contra accounts may be used to preserve the historical balance in the associated account while at the same time reducing the associated account's value, since the two accounts will net to the current book value. Accounts that are contra accounts will be identified later.

Introduction to the Accounting Cycle

The accounting cycle consists of eight basic steps that are followed by bookkeepers and accountants to manage the accounts of an organization throughout a fiscal year. These steps will be covered in detail in the following study units.

1) **Identify** financial events and gather details about them. **Analyze** the events to determine how each will impact the financial statements.

2) **Record** transactions in the **General Journal**.

3) **Post** journalized transactions to **ledger accounts**.

4) Prepare **unadjusted trial balance**.

5) Make **adjusting entries**.

6) Prepare **adjusted trial balance**.

7) Prepare **financial statements**.

8) At the end of the accounting period, prepare and post the necessary **closing entries** to move the balances from the temporary accounts to the Retained Earnings account, a permanent equity account, and then prepare a **post-closing trial balance** to verify that all temporary accounts have been reset to zero balances.

Note: Certain of the adjusting entries made in Step 5 will need special attention at the beginning of the next accounting period to avoid having some duplicate transactions in the next period. That will be discussed later.

Study Unit 3: A.2. Debits, Credits, and T-Accounts

Use of T-Accounts to Analyze Debits and Credits

Debits must always equal credits. How is that to be accomplished?

The simplest representation of a ledger account is the **T-account**, called that because of its resemblance to the letter "T." A T-account is a ledger account in simplified form. T-accounts are used to illustrate entries that have been or will be recorded in specific accounts, usually for purposes of analysis.

Whenever accounting transactions are recorded, **debits are always recorded on the left side of the ledger, and credits are always recorded on the right side of the ledger**.

> **Note**: An amount entered on the left side of a ledger account is called a **debit**, or a **debit entry**. An amount entered on the right side of a ledger account is called a **credit** or a **credit entry**.

A T-account looks like the following:

Account Name	
Left or debit side	Right or credit side

T-accounts are used to analyze accounting transactions because they provide a simple representation of the elements of a transaction. However, more information is needed in formal accounting records. Therefore, in accounting systems, the T-account is replaced by a **ledger account**.

Ledger Accounts

In a manual accounting system, all the ledger accounts with all the entries recorded in them are kept in a binder, using a separate page or pages for each ledger account. Each account page contains the opening balance in the account, all the debit and credit entries that have either increased or decreased the balance in the account, and the current balance in the account. For example, the ledger account Cash keeps track of amounts received (debited to the account), amounts paid (credited to the account), and the balance of cash available for making disbursements.

Following is an example of a ledger account page. Note that debits are on the left and credits are on the right.

ACCOUNT: **ACCOUNT NO.:**

Date	*Description*	*Ref*	*Debit*	*Credit*	*Balance*	*Dr Cr*

The Accounting Cycle: Step 1 – Identify and Analyze Events to be Recorded

Note: This is the **first** of the eight steps in the accounting cycle.

The first step in the accounting cycle is to identify and analyze events to be recorded as transactions in the accounting system. Events are recorded based on information from source documents that provide evidence that the event took place. Source documents should exist for all the regular, daily transactions recorded in the accounting system, and they should be original documents.[15] For example:

- A sales invoice that is issued when the customer obtains control of the asset is an original source document for recording revenue earned and the customer's obligation to make payment.
- Time sheets or employment contracts are original source documents for recording salaries and wages due to employees.
- A purchase order issued for a purchase, a packing slip received with the items, and a receiving report[16] are original source documents for recording the obligation to make payment to a supplier, if the information is the same on all of the documents.

When an automated accounting information system is used, information about transactions can be captured in various ways. Accounting software can be integrated with credit card processors, point-of-sale software, and the company's bank, for example. Integration can create transactions automatically, but it will still be necessary to analyze each created transaction to determine that it accurately captures the event; and some transactions will need to be manually entered.

The Accounting Cycle: Step 2 - Journalize Transactions

Note: This is the **second** of the eight steps in the accounting cycle.

In Step 2 of the accounting cycle, the analyzed information from Step 1 is organized into a record of the transaction. Recall that a transaction is an event that affects the financial information presented in the organization's financial statements and that needs to be recorded in the accounting records. Every transaction must affect at least two ledger accounts.

In a manual accounting system, transactions are first recorded in the **General Journal**. The General Journal is a record of all the organization's transactions. The General Journal shows all the important information about each transaction in one place, including the date of the transaction; the ledger accounts to be debited and credited including each account name and account number; the amounts of the debits and credits; and an explanation of the event being recorded.

The General Journal is a permanent, chronological record of all the financial events in the life of the business. It is a tool for describing transactions and making them available for analysis. Using the information in the General Journal, a transaction can be researched to find a description of the event that was being recorded, exactly which accounts it affected, and by how much. Furthermore, recording transactions first in the General Journal helps prevent errors. Because the offsetting debits and credits appear together for each transaction, with the debits on the left and the credits on the right, the General Journal provides an opportunity to make sure that the totals of the debits and the credits are equal. Thus, the General Journal provides a way to see if any debits or credits have been omitted or duplicated, or if a debit entry is incorrectly recorded as a credit or if a credit entry is incorrectly recorded as a debit, for example.

[15] Source documents will generally not exist for adjusting entries, nor will they exist for closing entries, both of which are discussed later.

[16] A receiving report is prepared to report the receipt of inventory. In an automated accounting information system, a receiving report is created automatically from information on the receipt that is input to the system.

Recording a transaction in the General Journal is called **journalizing** the transaction. Journalizing a transaction in a manual system does not post the transaction to the accounting system, but it is the first step in posting it.

A General Journal has two money columns, one for debit amounts and one for credit amounts. The debit amounts are recorded in the left hand column of the ledger, and the credit amounts are recorded in the right hand column. If more than one account is being debited and/or more than one account is being credited in a transaction, all the debit entries are listed first and then all the credit entries are listed.

The debits in each transaction must be equal to the credits in the transaction so that the accounting equation, **Assets = Liabilities + Equity**, remains in balance.

Note: Remember – Debits on the left, credits on the right!

A transaction recorded in the General Journal is called a **journal entry**. A journal entry includes both debits and credits, and (it cannot be said often enough) the debits must always equal the credits. A transaction may involve debits to more than one account and credits to more than one account. A journal entry that includes debits to multiple ledger accounts and/or credits to multiple ledger accounts is called a **compound journal entry**; and the total of the debits must equal the total of the credits in the transaction.

The General Journal looks like the following:

General Journal **Page [Number]**

Date	*Account Titles and Explanations*	*A/C#*	*Debit*	*Credit*

Recording transactions in the General Journal—**journalizing** them—requires the ability to analyze transactions and determine the effect each one should have on assets, liabilities, and equity; and it requires a knowledge of the standard form and arrangement of journal entries in the General Journal.

The standard form and arrangement of journal entries in the General Journal is as follows:

Date of the transaction – The month and effective date of the transaction is written in the "Date" column. A General Journal covers a full fiscal year, so the effective year is on the journal itself and may not need to be repeated for each entry. The month does not need to be repeated until a new page is started.

Name of account to be debited – The name of the ledger account to be debited is written on the first line of the journal entry. The account name to be debited is written at the far left of the "Account Titles and Explanations" column so that it is right up against the "Date" column. If more than one account is to be debited, a separate line is used for each, and the name of each account is written at the far left of the column.

Account number – The account number of each ledger account to be debited is recorded in the "A/C #" column.

Debit amount – The amount of the debit for each account to be debited is entered in the "Debit" column (the left-hand money column) on the appropriate line. If a transaction has more than one debit entry, each

debit entry for that transaction is listed on a separate line before any of that credit entries for that transaction are listed.

Name of account to be credited – The name of the ledger account to be credited is written on the next line of the journal entry. The name of the account to be credited **is indented** from the left side of the "Account Titles and Explanations" column so that it is **not** up against the "Date" column. If more than one account is to be credited, a separate line is used for each credit entry, and the name of each account being credited is indented from the left side of the column.

Account number – The account number of each ledger account to be credited is recorded in the "A/C #" column.

Credit amount – The amount of the credit for each account to be credited is entered in the "Credit" column (the right-hand money column) on the appropriate line. If a transaction has more than one credit entry, each credit entry for that transaction is listed on a separate line.

Explanation – A brief explanation of the transaction follows on the line or lines below the credit(s), using as many lines as necessary to explain the transaction. Each line of the explanation begins at the left edge of the "Account Titles and Explanations" column.

Note: The exact names of the ledger accounts being debited and credited must be used in the General Journal. The names must match the names of the accounts in the Chart of Accounts. The account numbers in the General Journal must match the account numbers for each account in the Chart of Accounts.

The Accounting Cycle: Step 3 - Post Transactions to Ledger Accounts

Note: This is the **third** of the eight steps in the accounting cycle.

After transactions have been recorded in the General Journal, the individual debits and credits from each journal entry are posted to the appropriate ledger accounts in the accounting system, using individual ledger accounts that look like the following example for the Cash account.

ACCOUNT: CASH **ACCOUNT NO.: 10001**

Date	*Description*	*Ref*	*Debit*	*Credit*	*Balance*	*Dr Cr*

Note: Debits always go in the left-hand column and credits always go in the right-hand column.

The entries posted to the ledger accounts duplicate the information in the General Journal, with three additional pieces of information.

1) **General Journal page number**. In the "Ref" column, the page number in the General Journal where the transaction is journalized is noted so that if someone needs to research the full transaction, they will be able to locate all the information about it.

2) **Account balance.** By following the rules for debits and credits—whether each one increases or decreases the account's balance depending on whether the account is an asset account, a liability account, or an equity account—the balances in the affected accounts are recalculated after each transaction is posted to keep the account balance up to date.

3) **Debit balance or credit balance.** Whether the calculated balance is a debit balance or a credit balance should be noted next to the balance using a "Dr" for a debit balance or a "Cr" for a credit balance.

Review

The bookkeeping process covered thus far is:

1) A financial event occurs, and a source document (or documents) is created or received to evidence the financial event. The event is analyzed to determine the effect it should have on the financial statements.

2) Using the source document, information is entered in the General Journal, including the transaction date, the account or accounts to be debited and credited, the amount of each debit and credit, and information about the transaction.

3) The debits and the credits are posted from the General Journal to the appropriate ledger accounts and the account balances are calculated.

The above portion of the accounting cycle is performed repeatedly as financial events occur.

Study Unit 4: A.2. Example: Transactions for a New Business

Several transactions required to organize a new business by the name of Greenworks Distribution Company are described, the General Journal entries are illustrated, and then the entries as posted to the ledger accounts are shown.

The Chart of Accounts for this example is as follows. The following accounts are the ledger accounts that will be affected in this example. Notice that the accounts are arranged according to type in the order (1) Assets, (2) Liabilities, and (3) Equity.

Greenworks Distribution Company Chart of Accounts		
Account Number	**Account Name**	**Type of Account**
11001	Cash	Asset
14001	Inventory	Asset
17101	Land	Asset
17201	Buildings	Asset
17301	Furniture & Equipment	Asset
21001	Accounts Payable	Liability
31001	Common Stock	Equity
31002	Additional Paid-in Capital	Equity

Several transactions are described below, the names of the ledger accounts to which each will be debited or credited and the amounts of the debits and credits are given along with some explanation. Following the descriptions, the General Journal illustrates the journalized transactions; and that is followed by the various ledger accounts and the postings to them.

Date	Description
May 1, 20X1	Issued 50,000 shares of $1.00 par value common stock at a price of $10 per share in exchange for $500,000 cash.

The **par value** of stock is the price below which the stock may not be sold in an initial offering, so management generally sets the par value of each share very low. In this example, the par value of each share is $1.00. Stock is almost always sold for an amount greater than its par value. In this example, each share is sold for $9.00 more than its par value.

Cash is an asset, and asset accounts are debited to increase them. When common stock is issued for cash, the Cash account is debited for the amount received, which is $500,000 in this example. Equity accounts are credited to increase them, and two equity accounts are credited.

- The Common Stock account, an equity account, is credited for the par value of the shares sold, $50,000 (50,000 shares at $1.00 par value per share), and
- The remainder of the cash received over and above the par value, $450,000, is credited to the Additional Paid-in Capital account, another equity account.

Dr Cash 500,000.00
Cr Common stock.. 50,000.00
Cr Additional Paid-in Capital 450,000.00

The journal entry to record the sale of common stock is a **compound journal entry** because it contains one debit and two credits.

Date	Description
May 2, 20X1	Purchased land and a building for $300,000 in cash from ABC Industries. The cost for the land was $100,000 and the cost for the building was $200,000.

Land and buildings are assets, and asset accounts are increased by debits. The Land account is debited for $100,000 and the Buildings account is debited for $200,000. Cash is also an asset, and assets are decreased by credits. The Cash account is credited for $300,000 to decrease it by the amount paid.

One asset, cash, has been exchanged for two other assets, land and a building. Since all the changes occur in the assets section of the balance sheet, total assets are unchanged, and total liabilities and total equity are also unchanged by the purchases. The journal entry is a compound journal entry because it contains two debits and one credit.

Dr Land..100,000.00
Dr Buildings...200,000.00
Cr Cash..300,000.00

Date	Description
May 15, 20X1	Sold 25% of the land for $25,000 to DEF Assoc. for cash. The land was sold at its cost to Greenworks, so there was no gain or loss on the sale.

Cash is an asset, and assets are increased by debits. The Cash account is debited to increase it by the $25,000 received for the sale. The Land account is another asset account, and assets are decreased by credits, so the Land account is credited to decrease it by the $25,000 value of the land that was sold.

Dr Cash 25,000.00
Cr Land.. 25,000.00

Date	Description
May 16, 20X1	Purchased furniture and equipment from F & E Assoc. on credit for $55,000. Payment is due to F & E on June 30, 20X1.

Furniture and equipment are assets, and assets are increased by debits. Accounts payable are liabilities, and liabilities are increased by credits. The Furniture & Equipment asset account is debited for $55,000 to increase it by the cost of the furniture and equipment purchased. The Accounts Payable liability account is credited for $55,000 to increase it by the amount owed for the furniture and equipment.

Dr Furniture & Equipment.. 55,000.00
Cr Accounts Payable.. 55,000.00

Date	Description
May 20, 20X1	Purchased inventory from Half's Wholesale on credit for $50,000, including transportation-in.

Greenworks is using a **perpetual inventory system**, meaning the Inventory account is increased by the cost of inventory items purchased as soon as the items are received and decreased by the cost of inventory items sold as soon as the items are sold.[17]

Inventory is an asset, and assets are increased by debits. The Inventory account is debited for $50,000 to increase it by the cost of the inventory purchased. Transportation charges on shipments of inventory received (called **transportation-in**) are part of the cost of the inventory.

Accounts payable are liabilities, and liabilities are increased by credits. The Accounts Payable account is credited for $50,000 to increase it by the amount owed.

Dr Inventory 50,000.00
    Cr Accounts Payable 50,000.00

Date	Description
May 25, 20X1	Certain items of the inventory purchased are returned for credit to Half's Wholesale. The cost of the items returned is $500.

A portion of the preceding entry is reversed, representing the items returned. The Inventory account, an asset account, is credited to reduce it by $500, and the Accounts Payable account, a liability account, is debited to reduce it by $500.

Dr Accounts Payable 500.00
    Cr Inventory 500.00

The preceding transactions are journalized as follows:

Note: When journalizing transactions, the account title or titles of accounts being debited are placed at the left of the column, and the account title or titles of accounts being credited are indented, to coordinate with the rule, "debits on the left, credits on the right." The debits are all listed first, and then all the credits are listed.

[17] A perpetual inventory system is one method of recording inventory transactions. The methods of recording inventory transactions will be covered later.

General Journal **Page 1**

Date		Account Titles and Explanations	A/C#	Debit	Credit
May	1	Cash	11001	500000.00	
		Common Stock	31001		50000.00
		Additional Paid-in Capital	31002		450000.00
		Issued 50,000 shares of $1.00 par			
		value common stock for cash			
	2	Land	17101	100000.00	
		Buildings	17201	200000.00	
		Cash	11001		300000.00
		Purchased land and building, paid			
		$300,000 cash			
	15	Cash	11001	25000.00	
		Land	17101		25000.00
		25% of land sold at cost to DEF Assoc.			
		in exchange for cash			
	16	Furniture & Equipment	17301	55000.00	
		Accounts Payable	21001		55000.00
		Purchased furniture and equipment			
		from F & E Assoc. on credit			
	20	Inventory	14001	50000.00	
		Accounts Payable	21001		50000.00
		Merchandise inventory purchased			
		from Half's Wholesale on credit			
	25	Accounts Payable	21001	500.00	
		Inventory	14001		500.00
		Merchandise inventory returned			
		to Half's Wholesale			

Next, the transactions are posted to the proper ledger accounts. The postings to the ledger accounts follow. Since this is a new business, all the ledger accounts have beginning balances of zero.

The number in the "Ref" column references the page number in the General Journal where the transaction is journalized, in case it needs to be researched to see all the parts of the journal entry. All the following postings are journalized on page 1 of the General Journal.

The balance in each account is calculated after each entry is posted to it and the balance is labeled as a debit balance (Dr) or a credit balance (Cr).

For purposes of this example, multiple accounts appear on each page. However, in a manual accounting system, each account and the entries posted to it would be on a separate page or pages.

ACCOUNT: CASH **ACCOUNT NO.: 11001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	1	Stock sale	1	500000.00		500000.00	Dr
	2	Purch land & bldg.	1		300000.00	200000.00	Dr
	15	Sale of 25% of land	1	25000.00		225000.00	Dr

ACCOUNT: INVENTORY **ACCOUNT NO.: 14001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	20	Inventory purch.	1	50000.00		50000.00	Dr
	25	Inventory returned	1		500.00	49500.00	Dr

ACCOUNT: LAND **ACCOUNT NO.: 17101**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	2	Purchase of land	1	100000.00		100000.00	Dr
	15	Land sold to DEF	1		25000.00	75000.00	Dr

ACCOUNT: BUILDINGS **ACCOUNT NO.: 17201**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	2	Beginning balance				0.00	
		Purchase of bldg..	1	200000.00		200000.00	Dr

ACCOUNT: FURNITURE & EQUIPMENT **ACCOUNT NO.: 17301**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	16	F & E purchased	1	55000.00		55000.00	Dr

ACCOUNT: ACCOUNTS PAYABLE **ACCOUNT NO.: 21001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	16	Due to F & E Assoc.	1		55000.00	55000.00	Cr
	20	Due to Half's Whlsl.	1		50000.00	105000.00	Cr
	25	Returned to Half's	1	500.00		104500.00	Cr

ACCOUNT: COMMON STOCK **ACCOUNT NO.: 31001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	1	Stock sale-par val.	1		50000.00	50000.00	Cr

ACCOUNT: ADDITIONAL PAID-IN CAPITAL **ACCOUNT NO.: 31002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
	1	Stock sale-APIC	1		450000 00	450000 00	Cr

When a manual accounting system is used, errors can easily occur as entries are copied from the General Journal to post them to individual ledger accounts. When the bookkeeping is done in an automated accounting information system, though, input that updates the ledger accounts is done only once. A General Journal may not exist as a separate journal with that name, but the entries as shown in a General Journal are available as a general ledger report. Since the input is done once, copying errors do not occur.

Study Unit 5: A.2. The Unadjusted Trial Balance

The Accounting Cycle: Step 4 – Prepare an Unadjusted Trial Balance

Note: This is the **fourth** of the eight steps in the accounting cycle.

An **unadjusted trial balance** is prepared by transferring the current balances from the ledger accounts to a report that shows all the ledger account balances, with debit balances in the left-hand column and credit balances in the right-hand column. "Unadjusted" means that adjusting entries (explained later) have not yet been posted. Ledger accounts in a trial balance are listed in the order in which they appear in the Chart of Accounts.

The debit column and the credit column are totaled. The total of all the debit balances should be equal to the total of all the credit balances. If the totals are not the same, an error has been made and it must be investigated and corrected.

An unadjusted trial balance can be prepared at any time. When a manual accounting system is in use, an unadjusted trial balance should be prepared frequently to make sure the ledger remains in balance. Preparing an unadjusted trial balance after each posting session is recommended, so that if the trial balance does not balance, only the most recently posted entries need to be checked to find the error.

An unadjusted trial balance prepared after posting the preceding items is as follows. The unadjusted trial balance shows that the ledger is in balance after the postings because the total of the accounts with debit balances is equal to the total of the accounts with credit balances.

The unadjusted trial balance after posting the preceding transactions is as follows.

Greenworks Distribution Company Trial Balance (Unadjusted) May 20, 20X1			
Account Number	**Account Name**	**Debits**	**Credits**
11001	Cash	225,000.00	
14001	Inventory	49,500.00	
17101	Land	75,000.00	
17201	Buildings	200,000.00	
17301	Furniture & Equipment	55,000.00	
21001	Accounts Payable		104,500.00
31001	Common Stock		50,000.00
31002	Additional Paid-in Capital		450,000.00
Totals		604,500.00	604,500.00

Purpose and Limitations of the Trial Balance

A trial balance that has been prepared properly and in which the total of the debit account balances matches the total of the credit account balances indicates that:

1) Total debits and total credits for all the transactions recorded up to the current date are equal.
2) The debit or credit ending balance for each ledger account has been correctly computed.
3) The debit and credit balances listed in the trial balance have been correctly summed.

A trial balance can expose some of the errors that can occur in recording transactions. If the total of the debit balances does not equal the total of the credit balances, then one or more errors have been made. Examples of potential errors are:

- A debit may have been posted to a ledger account as a credit, or a credit may have been posted as a debit.
- The ending balance in one or more accounts may have been calculated incorrectly.
- An incorrect amount or amounts may have been recorded in the process of preparing the trial balance from the ending ledger account balances.
- In preparing the trial balance, a debit balance in an account may have been copied into the credit column of the trial balance, or a credit balance in an account may have been copied into the debit column.
- An error may have been made in summing the debits or credits in the trial balance.

However, the trial balance is limited in what it can show. The preparation of a trial balance demonstrating that total debits equal total credits does not imply that all the transactions have been correctly analyzed and posted to the correct ledger accounts. If an incorrect account has been debited or credited in a transaction or transactions, if a transaction amount is incorrect, or if one or more transactions have been missed and not recorded at all, the trial balance will balance, but the accounting records will not be accurate.

Note: A trial balance is an indication **only** that total debits and total credits posted are equal.

Therefore, more tests are required before it can be determined that all the posting has been done properly. The documentation should be reviewed, the journalized transactions should be checked, and the posted entries should be compared with the journalized transactions. Furthermore, the balances on the trial balance should be compared with the ending balances in the individual ledger accounts to make sure the trial balance has been prepared properly. If errors are found, they should be corrected, and a corrected trial balance should be prepared.

Although a trial balance is limited to showing that total debits and total credits are equal, it is still useful. It shows that the ledger is in balance, and it can be used in the preparation of the financial statements, after determining that all the posting is complete and has been performed properly.

Study Unit 6: A.2. Comprehensive Income

Introduction to the Recording of Comprehensive Income

Businesses have a goal of earning profits. Operating profitably increases equity, whereas operating unprofitably decreases equity.

Profits may be retained in the business to finance growth, and the profits may be invested in any type of asset, such as land, buildings, equipment, or increases in inventory to support increased sales. Some of the retained earnings may be available in cash, but many of them may be invested in other types of assets. It is important to understand that earnings are not necessarily available in the form of cash. If the company does have sufficient cash, though, some of the profits may be distributed to the owners. A corporation's owners are its shareholders, and distributions to shareholders take the form of dividends.

For the accounting equation, **Assets = Liabilities + Equity**, to remain in balance, any transaction that changes equity must also change total assets or total liabilities, or both. Profitable operations will usually result in an increase in not only equity but also in total assets, so that the accounting equation remains in balance. An increase in equity from profitable operations could also be balanced by a decrease in liabilities, for example when a loan is repaid.

Comprehensive income is defined by the Financial Accounting Standards Board, the entity that develops and promulgates accounting standards for the United States, as "the change in equity (net assets) of a business entity during a period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners."[18]

The components of comprehensive income include all revenues, expenses, gains, and losses during a period.[19] The aggregation of most, **but not all**, of the components of comprehensive income results in net income, which is reported on the **income statement**.

- **Net income** is an excess of revenues and gains over expenses and losses reported on the income statement. Net income increases equity because in the year-end close, it is credited to the Retained Earnings account in equity, increasing Retained Earnings.
- A **net loss** is an excess of expenses and losses over revenues and gains reported on the income statement. A net loss reported on the income statement decreases equity because in the year-end close, it is debited to the Retained Earnings account in equity, decreasing Retained Earnings.

Other Comprehensive Income

Certain revenues, expenses, gains, and losses that are included in comprehensive income are **not** reported on the income statement. Those items, which are specified in the accounting standards, are called **other comprehensive income** items. They are recorded in the **Accumulated Other Comprehensive Income (AOCI) account,** an account in the **equity** section of the balance sheet. Thus, instead of reaching equity through the income statement because of being transferred to the Retained Earnings account in the year-end close, other comprehensive income items are recorded directly in equity.

Comprehensive income comprises all components of net income and all components of other comprehensive income[20] recorded during the period. Comprehensive income for the period is total credits in all income statement accounts and in the Accumulated Other Comprehensive Income (AOCI) account less total debits in all income statement accounts and in the AOCI account.

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[18] FASB *Accounting Standards Codification®* Master Glossary.

[19] FASB Statement of Financial Accounting Concepts No. 8, *Conceptual Framework for Financial Reporting-Chapter 7, Presentation* (December 2021), paragraph PR18, p. 4.

[20] FASB *Accounting Standards Codification®* Master Glossary.

The **statement of comprehensive income** includes the income statement plus the other comprehensive income items for the period. The net of the other comprehensive income items is the **amount of change** in the Accumulated Other Comprehensive Income (AOCI) account during the period.

Summary of Comprehensive Income

Revenues, expenses, gains, and losses provide details about how much and in what ways the total equity of an organization increased or decreased during the period other than from investments by owners or distributions to owners.

All revenues and gains increase total equity, and all expenses and losses decrease total equity, either through the income statement leading to the Retained Earnings account in equity or by changing total equity directly through the Accumulated Other Comprehensive Income (AOCI) account.

- Most revenues, gains, expenses, and losses are reported on the income statement as net income or a net loss. Net income (loss) increases (decreases) the balance of total equity because it is transferred to the Retained Earnings account in the equity section of the balance sheet, during the year-end close.

  This section of the textbook covers the income statement.

- Certain other revenues, expenses, gains, and losses are excluded from net income. Those items are called **other comprehensive income**, and they are instead reported in the Accumulated Other Comprehensive Income (AOCI) account, an account in the equity section of the balance sheet. Thus, those items also affect the balance of total equity, although they are not reported on the income statement. Items to be reported in Accumulated Other Comprehensive Income are specified in the accounting standards.

  Items that are reported in the Accumulated Other Comprehensive Income (AOCI) account are covered in more detail later in this textbook, in Study Unit 22 in Section B. This section does not include the reporting of any items of other comprehensive income.

Income Statement Ledger Accounts for Revenues, Gains, Expenses, and Losses

Ledger accounts are used to classify revenues, gains, expenses, and losses for reporting on the income statement, just as they are used for asset, liability, and equity accounts.

A separate ledger account is used for each major type of revenue, gain, expense, and loss. The summarized revenues, gains, expenses, and losses are reported on the **income statement**. Revenue and gains minus expenses and losses is reported on the income statement as either net income or a net loss for the period.

Note: Asset, liability, and equity accounts are **balance sheet** accounts, so their balances are reported on the balance sheet that is prepared at the end of an accounting period.

Most revenue, gain, expense, and loss accounts are reported on the **income statement** that is prepared at the end of an accounting period.

Net income from the income statement increases the balance of the Retained Earnings account, and a net loss from the income statement decreases the balance of the Retained Earnings account in the equity section of the balance sheet.

Thus, the balances in revenue, gain, expense, and loss accounts reported on the income statement provide the detail behind the increases and decreases that they cause in total equity.

Debits and Credits to Income Statement Accounts

Since revenue, gain, expense, and loss accounts provide the detail behind the increases and decreases to equity that they bring about, the effect of debits and credits to those accounts conforms to their effect on equity.

A **credit** to any type of income statement account **increases** net income, either by increasing revenues/gains or by decreasing expenses/losses. Since a credit to an income statement account increases net income, it **increases** equity, just as crediting an equity account directly increases equity.

- A credit to a revenue or gain account increases revenues or gains, increases net income, and increases equity.
- A credit to an expense or loss account decreases expenses or losses, increases net income, and increases equity.

A **debit** to any type of income statement account **decreases** net income, either by increasing expenses/losses or by decreasing revenues/gains. Since a debit to an income statement account decreases net income, it **decreases** equity, just as debiting an equity account directly decreases equity.

- A debit to an expense or loss account increases expenses or losses, decreases net income, and decreases total equity.
- A debit to a revenue or gain account decreases revenues or gains, decreases net income, and decreases total equity.

Following is a summary of debits and credits and their effects on the balances of the various types of ledger accounts, including both balance sheet accounts and income statement accounts:

	Effect on the Account Balance	
Type of account	**of Debits**	**of Credits**
Asset accounts	Increase	Decrease
Liability accounts	Decrease	Increase
Equity accounts	Decrease	Increase
Revenue or gain accounts	Decrease	Increase
Expense or loss accounts	Increase	Decrease

Note:

- Revenues and gains increase equity. Therefore, increases to revenues and gains are recorded by credits.
- Expenses and losses decrease equity. Therefore, increases to expenses and losses are recorded by debits.

Revenue, gain, expense, and loss account balances are included in any trial balance that is prepared to show that total debits equal total credits. For revenue and gain accounts, the credit balances represent the revenue or gain for the period. For expense and loss accounts, the debit balances represent the expense or loss for the period.

Normal Account Balances

The normal account balances, including not only asset, liability, and equity accounts (given previously), but also revenue/gain and expense/loss accounts, match the type of entry—debit or credit—that increases the account balance for each. They are as follows.

Type of Account	Normal Account Balance	Accomplished by Means of
Asset accounts	Debit	Debits to account > credits
Liability accounts	Credit	Credits to account > debits
Equity accounts	Credit	Credits to account > debits
Revenue and gain accounts	Credit	Credits to account > debits
Expense and loss accounts	Debit	Debits to account > credits

Study Unit 7: A.2. Subsidiary Ledger Accounts

Ledger Accounts and Subsidiary Ledger Accounts

Ledger accounts are used to accumulate in one place all the information about increases and decreases to the specific ledger account as well as the current balance in the account.

However, some ledger accounts contain transactions for multiple entities. For example, the balance in the Accounts Payable ledger account is a compilation of all the individual transactions and balances owed to all the individual suppliers. Because it is a compilation of transactions with multiple suppliers, it would not be practical to use the Accounts Payable ledger account to look up the amount due to a given supplier, for example. Therefore, a separate payable account needs to be maintained for each supplier in order to be able to see and analyze activity with each supplier. Maintaining a separate payable account for each supplier would cause the ledger to be impossibly large, though. If an unadjusted trial balance were out of balance, locating the error or errors would be an impossible task. Therefore, the ledger is segregated into several separate ledgers.

Using accounts payable as an example, an account is established for each supplier from whom purchases are made on credit, and all the accounts for suppliers are put into a separate ledger called the **accounts payable ledger**. The accounts payable ledger is a **subsidiary ledger**, and the individual supplier accounts in the accounts payable subsidiary ledger are called **subsidiary ledger accounts**, or **sub-ledger accounts.**

The accounts payable subsidiary ledger accounts are used to keep detail records for each supplier that back up the balance in the Accounts Payable ledger account. Each accounts payable sub-ledger account is used to record purchases made from and payments made to an individual supplier to whom trade payables are due. The transactions and balances in all the accounts payable sub-ledger accounts sum to the transactions and the balance in the Accounts Payable ledger account. The Accounts Payable ledger account is the **control account**, also called the **controlling account**, for the accounts payable sub-ledger accounts. A control account contains the totals of the transactions and the balances in its related sub-ledger accounts.

After the supplier accounts are placed in the accounts payable subsidiary ledger, only the original Accounts Payable ledger account remains in the group of accounts that is used to prepare reports. The remaining group of accounts is called the **general ledger** to distinguish it from the subsidiary ledgers.

The **control account**, Accounts Payable, takes the place in the accounting system of the numerous individual suppliers' accounts that form the accounts payable subsidiary ledger. In a single posting session, entries may be posted to several individual sub-ledger accounts that support a control account, and then the total of those sub-ledger postings is posted to the control account along with the offsetting debits or credits.[21]

The Accounts Payable account for Greenworks has a current credit balance of $104,500.00, and of that amount, $55,000 is due to F & E Associates while $49,500 is due to Half's Wholesale. Therefore, Greenworks has a subsidiary accounts payable ledger account for F & E Associates with a credit balance of $55,000 and one for Half's Wholesale with a credit balance of $49,500, and those subsidiary ledger accounts need to be updated for all transactions with those suppliers. As each new supplier is added, a new subsidiary accounts payable ledger account will be established for it.[22]

[21] If an automated accounting information system is in use, the sub-ledger accounts and their related control accounts are updated automatically at the same time.

[22] The sub-ledger accounts are not illustrated in the examples in this book, but they exist.

Some examples of subsidiary ledgers that may be used, depending on the needs of the organization, are as follows.

- The asset ledger account, Accounts Receivable, which is used to track amounts owed by customers, is a control account with a sub-ledger receivable account for each customer who purchases on credit. Each time a credit sale is recorded, the sub-ledger receivable account for that customer is debited to increase the customer's balance due. The total credit sales recorded for all customers' sub-ledger accounts in a posting session is then debited to the Accounts Receivable control account. The offsetting credit is to Sales Revenue. When remittances are received, the individual customers' sub-ledger receivable accounts are credited before the Accounts Receivable control account is credited and Cash is debited for the total received. As new customers are added, a new receivable sub-ledger account will be established for each one.
- The asset ledger account, Inventory, is usually a control account with a sub-ledger account for each inventory item, identified by inventory part number and name, to track changes in the on-hand inventory of each inventory item. In the sub-ledgers, the total number of units on hand of each item can be adjusted each time inventory is received or sold, so that the number of units that **should be** on hand for each inventory item can be maintained along with the cost of that inventory item. The number of units that should be on hand is needed when taking customers' orders, for determining when to reorder, and for comparison with the actual number of units counted when a physical inventory is taken.
- The asset ledger account, Furniture & Equipment, is a control account with a sub-ledger account for each piece of furniture or equipment, to facilitate maintenance of a separate record for each piece. The Accumulated Depreciation-Furniture & Equipment account is also a control account containing the depreciation records for all the individual pieces of equipment maintained in associated sub-ledger accounts.[23]

Subsidiary ledgers are kept in separate journals. Each subsidiary ledger account contains its opening balance, all the entries that have increased and decreased the balance in the account, and the current balance in the account. **The sum of the balances of the accounts in a subsidiary ledger should be equal to the balance in the associated control account.**

Regular reconciliations should be done between each control account and its subsidiary ledger, and any differences should be investigated and corrected.

Example: Payments are received from three customers, Customer A, Customer B, and Customer C.

- A $100 payment received from Customer A is recorded as a decrease to the balance outstanding in Customer A's sub-ledger receivable account.
- A $200 payment received from Customer B is recorded as a decrease to the balance outstanding in Customer B's sub-ledger receivable account.
- A $300 payment received from Customer C is recorded as a decrease to the balance outstanding in Customer C's sub-ledger receivable account.

The total of the three payments, $600, is recorded as a decrease (credit) to the control account, Accounts Receivable. The other side of the transaction in the general ledger is an increase (debit) of $600 to the ledger account, Cash.

Note that the above constitutes a $600 increase to one asset, Cash, and a $600 decrease to another asset, Accounts Receivable. The result is no change in total assets; and since there is no change in total liabilities or total equity, the accounting equation, **Assets = Liabilities + Equity**, remains in balance.

[23] Depreciation of fixed assets will be discussed briefly in this topic and included in transactions, and it will be covered in more detail in Section B, Financial Statement Preparation and Analysis.

Sub-ledger accounts such as individual customer receivable accounts or individual supplier payable accounts are generally assigned identifying account numbers. The numbering system for sub-ledger accounts can be anything that meets the needs of the organization. For example, the company may want to use the first digit in customer account numbers as a branch code or some other kind of code.

In an automated accounting information system, the individual sub-ledger accounts and the control account are updated at the same time when entries to them are posted. However, the sub-ledger accounts **must still be reconciled regularly** to their control accounts because errors can and do occur. For example, if someone posts an adjusting entry that affects the balance in a control account without also adjusting the relevant sub-ledger account or accounts, the sub-ledger accounts will not reconcile to the balance in the control account. Any differences must be investigated and corrected.

Note: Examples of sub-ledger postings are not included in the following examples of Greenworks' transactions.

Study Unit 8: A.2. Example: Revenue and Expense Transactions

The net income or net loss for the period reported on the income statement is ultimately transferred to equity by means of the Retained Earnings account.

For the accounting equation, **Assets = Liabilities + Equity**, to remain in balance, each transaction that changes net income (and thus equity through Retained Earnings) must also change another balance sheet account or accounts. Therefore, **each entry that affects net income will usually also affect a balance sheet account or accounts**.

- The standard for when revenue is recognized is explained in detail in Study Unit 22 in this book. However, in general, revenue is recognized **when the customer obtains control of the asset**. When recording revenue, the asset received by the seller in exchange for the item provided to the customer is debited (to increase it) and the appropriate revenue account is credited (to increase it). For example, a sale transaction for cash is recorded by debiting the Cash account, an asset, thereby increasing it, and crediting the Sales Revenue account, thereby increasing it and ultimately increasing equity through Retained Earnings. If no cash is received for the sale and the customer will remit the money later, the debit recorded when the sale is made is to another asset account, the Accounts Receivable account, instead of to the Cash account. Whether the debit goes to the Cash account or the Accounts Receivable account, the transaction increases assets and increases equity.

- The standard for when expenses are recognized is also covered in the Study Unit *Revenue Recognition and Income Measurement*, but generally, an expense is recognized **when a liability is incurred in the process of providing goods or services to customers and when the revenue for which the expense was incurred is recognized**, called the **matching principle**.

  Expenses can also be recognized through systematic and rational allocation among periods such as depreciation, where the cost of a fixed asset is expensed over several periods to recognize the benefit received from it during the periods in which it is used. Alternatively, if a cost will not provide a future benefit, it is recognized as an expense immediately when incurred. Usually administrative costs are expensed as incurred.

  When recording an expense, the appropriate expense account is debited to increase it, thereby decreasing net income and ultimately decreasing equity. If the expense is paid with cash, the Cash account, an asset account, is credited to decrease it. Most businesses initially credit the Accounts Payable account for the amount due, thereby increasing liabilities; and then when the payment is made, they debit Accounts Payable and credit Cash. For example, a utility bill to be paid is recorded by debiting Utilities Expense, thereby decreasing equity through Retained Earnings, and crediting Accounts Payable, thereby increasing liabilities. When the payment is made, Accounts Payable is debited and Cash is credited, thereby decreasing both total liabilities and total assets.

Earlier in this discussion, transactions to organize Greenworks Distribution Company, a new company, through May 20, 20X1 were illustrated. That illustration is now continued for the remainder of May and the month of June, and it includes operating transactions.

New Ledger Accounts

Greenworks' Chart of Accounts has been expanded to include Revenue accounts, Expense accounts, and the Retained Earnings account, as follows. The new ledger accounts are in bold face.

Greenworks Distribution Company Chart of Accounts		
Account Number	**Account Name**	**Type of Account**
11001	Cash	Asset
12001	**Accounts Receivable**	**Asset**
14001	Inventory	Asset
17101	Land	Asset
17201	Buildings	Asset
17301	Furniture & Equipment	Asset
21001	Accounts Payable	Liability
31001	Common Stock	Equity
31002	Additional Paid-in Capital	Equity
32001	**Retained Earnings**	**Equity**
41001	**Sales Revenue**	**Revenue**
51001	**Cost of Goods Sold**	**Expense**
51002	**Shipping-out expense**	**Expense**
52001	**Salaries & Wages Expense**	**Expense**
53002	**Utilities Expense**	**Expense**
54001	**Advertising Media Expense**	**Expense**
54002	**Advertising Production Expense**	**Expense**

Operating transactions for the months of May and June are as follows.

Date	Description
May 31, 20X1	Salaries and wages in the amount of $5,000 are paid for the month of May 20X1.

Salaries and wages are expenses, and expenses decrease equity. The Salaries & Wages expense account is debited for $5,000. The salaries and wages are paid with cash, and Cash is an asset account. An asset is decreased by a credit. Therefore, the Cash account is credited for $5,000.

Note: Recording of payroll is much more complex than is shown in this example, because income and other taxes, and sometimes other items as well, are withheld from employees' paychecks and need to be remitted to third parties; and employer payroll taxes due need to be recorded, too. Furthermore, the amounts due would probably not be paid in cash on the same date as the expense is recorded. However, this simplified version of the transaction will suffice for this purpose.

Dr Salaries & Wages Expense 5,000.00

Cr Cash.. 5,000.00

Date	Description
June 2, 20X1	Sales totaling $12,600 are made on credit. The cost of the inventory sold is $4,800. Shipping-out cost was $565.

Revenue increases equity, so the Sales Revenue account is credited for $12,600 to increase it. Accounts receivable are assets, and asset accounts are increased by debits, so the Accounts Receivable account is debited for $12,600 to increase it by the amount of the sales revenue expected to be received in the future from the customers.

Greenworks uses a **perpetual inventory system**, in which the Inventory account is adjusted immediately for changes that occur when inventory is either received or sold. So, the cost of the items sold is shifted from Inventory to Cost of Goods Sold expense as part of recording the sale. Expenses decrease equity, so the cost of the items sold is recorded by a debit for $4,800 to the Cost of Goods Sold expense account. Inventory is an asset, and asset accounts are decreased by credits. Therefore, the Inventory account is credited for $4,800.

Dr Accounts Receivable 12,600.00
Dr Cost of Goods Sold 4,800.00
  Cr Sales Revenue 12,600.00
  Cr Inventory 4,800.00

Note: The individual customer sub-ledger receivable accounts will need to be updated, too, but only the summary entry to the control account, Accounts Receivable, is shown.

Shipping-out cost is an expense, and expenses decrease equity; so, the shipping-out cost is recorded by a debit of $565 to the Shipping-out Expense account. The expense is paid in cash, and cash is an asset. Asset accounts are decreased by credits. Therefore, the Cash account is credited for $565 to record the cash payment.

Dr Shipping-out Expense 565.00
  Cr Cash 565.00

Date	Description
June 9, 20X1	An electricity bill for $689 from Watt Energy covering usage from May 10 through June 9, 20X1 is received, payable on June 25, 20X1.

The electricity used is classified as Utilities Expense, and expenses decrease equity and are recorded with debits. The Utilities Expense account is debited for $689, increasing it and decreasing net income and equity through Retained Earnings. The expense is due and payable on June 25, so Accounts Payable, a liability, is credited for $689 to increase it.

Dr Utilities Expense 689.00
  Cr Accounts Payable 689.00

Date	Description
June 12, 20X1	Sales totaling $20,800 are made on credit. The cost of the inventory sold is $7,900. Shipping-out cost is $690.

Revenue increases equity, and the sales revenue is recorded by a credit for $20,800 to the Sales Revenue account to increase it. Accounts receivable are assets, and asset accounts are increased by debits, so the Accounts Receivable account is debited for $20,800 to increase it by the amount of the sales revenue expected to be received in the future from the customers.

The cost of the items sold is an expense, and expenses decrease equity through Retained Earnings because they increase expenses and decrease net income. The cost of the items sold is recorded by a debit for $7,900 to the Cost of Goods Sold expense account. Inventory is an asset, and asset accounts are decreased by credits. Therefore, the Inventory account is credited for $7,900 to decrease it.

Dr Accounts Receivable 20,800.00
Dr Cost of Goods Sold 7,900.00
  Cr Sales Revenue 20,800.00
  Cr Inventory 7,900.00

Shipping-out cost is an expense, and expenses decrease equity; so, the shipping-out cost is recorded by a debit of $690 to the Shipping-out Expense account. The expense is paid in cash, and cash is an asset. Asset accounts are decreased by credits. Therefore, the Cash account is credited for $690 to record the cash payment.

Dr Shipping-out Expense 690.00
  Cr Cash 690.00

Date	**Description**
June 15, 20X1	An invoice dated June 15, 20X1 for $445 is received from Elite Productions for production of search engine advertising, payable on June 30, 20X1.

The expense is Advertising Production Expense, and that account is debited for $445 to increase it, thereby decreasing net income and decreasing equity through Retained Earnings. The Accounts Payable account is a liability account, and credits increase liabilities. The Accounts Payable account is credited for $445 to increase it.

Dr Advertising Production Expense 445.00
  Cr Accounts Payable 445.00

Date	**Description**
June 15, 20X1	An invoice for search engine advertising beginning June 15 is received from SearchIt for $955, payable on June 30, 20X1.

Advertising media expense is recorded by debiting the account by the same name for $955. A debit to an expense account increases expenses and decreases net income, decreasing equity through Retained Earnings. Accounts Payable is a liability, and liabilities are increased by credits. The Accounts Payable account is credited for $955.

Dr Advertising Media Expense 955.00
  Cr Accounts Payable 955.00

Date	**Description**
June 16, 20X1	Sales totaling $35,250 are made on credit. The cost of the inventory sold is $13,395. Shipping-out cost is $1,035.

Revenue increases equity, so the sales revenue is recorded by a credit for $35,250 to the Sales Revenue account to increase it. Accounts receivable are assets, and asset accounts are increased by debits, so the Accounts Receivable account is debited for $35,250 to increase it by the amount of the sales revenue expected to be received in the future from the customers.

The cost of the items sold is shifted from Inventory to Cost of Goods Sold expense as part of recording the sale. The cost of the items sold is an expense, and expenses decrease equity, so the cost of the items sold

is recorded by a debit for $13,395 to the Cost of Goods Sold expense account. Inventory is an asset, and asset accounts are decreased by credits. Therefore, the Inventory account is credited for $13,395.

Dr Accounts Receivable	35,250.00	
Dr Cost of Goods Sold	13,395.00	
Cr Sales Revenue		35,250.00
Cr Inventory		13,395.00

Shipping-out cost is an expense, and expenses decrease equity; so, the shipping-out cost is recorded by a debit of $1,035 to the Shipping-out Expense account. The expense is paid in cash, and cash is an asset. Asset accounts are decreased by credits. Therefore, the Cash account is credited for $1,035 to record the cash payment.

Dr Shipping-out Expense	1,035.00	
Cr Cash		1,035.00

Date	Description
June 20, 20X1	Sales totaling $42,500 are made on credit. The cost of the inventory sold is $16,150. Shipping-out cost is $1,410.

The sales revenue is recorded by a credit for $42,500 to the Sales Revenue account to increase it. Accounts receivable are assets, so the Accounts Receivable account is debited for $42,500 to increase it by the amount of the sales revenue expected to be received in the future from the customers.

The cost of the items sold is an expense, and expenses decrease equity, so the cost of the items sold is recorded by a debit for $16,150 to the Cost of Goods Sold expense account. Inventory, an asset, is decreased by $16,150 by crediting it.

Dr Accounts Receivable	42,500.00	
Dr Cost of Goods Sold	16,150.00	
Cr Sales Revenue		42,500.00
Cr Inventory		16,150.00

The shipping-out cost is recorded by a debit of $1,410 to the Shipping-out Expense account. The expense is paid in cash, so the Cash account is credited for $1,410 to decrease it.

Dr Shipping-out Expense	1,410.00	
Cr Cash		1,410.00

Date	Description
June 25, 20X1	The Watt Energy bill due on June 25 is paid.

The Watt Energy bill was expensed for $689 to increase the expense, and the Accounts Payable account was credited for $689 on June 9 to increase liability. When the bill is paid on June 25, the Accounts Payable account is debited for $689 to decrease it. The bill is paid with cash, and the Cash account is an asset account. Asset accounts are decreased by credits, so the Cash account is credited for $689.

Dr Accounts Payable	689.00	
Cr Cash		689.00

Date	Description
June 26, 20X1	Customer accounts receivable in the amount of $15,500 are collected.

The collection of cash from receivables increases cash, so the asset Cash is increased by $15,500 by debiting it. Accounts receivable, another asset, is decreased by $15,500 by crediting it.

Dr Cash	15,500.00	
Cr Accounts Receivable		15,500.00

Date	Description
June 29, 20X1	Customer accounts receivable in the amount of $21,550 are collected.

The collection of cash from receivables increases cash, so the asset Cash is increased by $21,550 by debiting it. Accounts receivable, another asset, is decreased by $21,550 by crediting it.

Dr Cash	21,550.00	
Cr Accounts Receivable		21,550.00

Date	Description
June 30, 20X1	Accounts payable invoices due to Elite Productions for $445 and to SearchIt for $955 are paid with cash.

The invoices due to Elite Productions and SearchIt were debited to expense accounts on June 15, and the Accounts Payable account was credited for a total of $1,400 ($445 + $955) on that date. When the invoices are paid, the Accounts Payable account, a liability account, is debited for $1,400 to decrease it. The invoices are paid with cash, and the Cash account is an asset account. Asset accounts are decreased by credits, so the Cash account is credited for $1,400.

Dr Accounts Payable	1,400.00	
Cr Cash		1,400.00

Note: The individual supplier sub-ledger payable accounts will need to be updated, too, but only the summary entry to the control account, Accounts Payable, is shown.

Date	Description
June 30, 20X1	Payment due to F & E Assoc. for furniture and equipment is paid with cash.

The invoice was debited to the asset account, Furniture & Equipment, on May 16, and the Accounts Payable account was credited for $55,000. When the invoice is paid, the Accounts Payable account is debited for $55,000 because debits decrease liability accounts. The invoice is paid with cash, and the Cash account is credited for $55,000 to decrease it.

Dr Accounts Payable	55,000.00	
Cr Cash		55,000.00

Date	Description
June 30, 20X1	Salaries and wages in the amount of $5,000 are paid for the month of June 20X1.

Salaries and wages are expenses, and an increase in expenses decreases equity. The expense is recorded by a debit to the Salaries & Wages Expense account for $5,000, which increases the expense and decreases equity through the Retained Earnings account. The salaries and wages are paid with cash, and Cash is credited for $5,000 to decrease it.

Dr Salaries & Wages Expense	5,000.00	
Cr Cash		5,000.00

The transactions are journalized as follows.

General Journal **Page 2**

Date		Account Titles and Explanations	A/C#	Debit	Credit
May	31	Salaries & Wages Expense	52001	5000 00	
		Cash	11001		5000 00
		Salaries and wages paid for the			
		month of May 20X1			
June	2	Accounts Receivable	12001	12600 00	
		Cost of Goods Sold	51001	4800 00	
		Sales Revenue	41001		12600 00
		Inventory	14001		4800 00
		To record sales of $12,600, cost of sales			
		$4,800			
	2	Shipping-out Expense	51002	565 00	
		Cash	11001		565 00
		Shipping-out costs for merchandise			
		shipped to customers			
	9	Utilities Expense	53002	689 00	
		Accounts Payable	21001		689 00
		Electricity used May 10-June 9, 20X1,			
		payable to Watt Energy			
	12	Accounts Receivable	12001	20800 00	
		Cost of Goods Sold	51001	7900 00	
		Sales Revenue	41001		20800 00
		Inventory	14001		7900 00
		To record sales of $20,800, cost of sales			
		$7,900			
	12	Shipping-out Expense	51002	690 00	
		Cash	11001		690 00
		Shipping-out costs for merchandise			
		shipped to customers			

General Journal **Page 3**

Date	Account Titles and Explanations	A/C#	Debit	Credit
15	*Advertising Production Expense*	54002	445 00	
	Accounts Payable	21001		445 00
	Due to Elite Productions for			
	production of search engine			
	advertising			
15	*Advertising Media Expense*	54001	955 00	
	Accounts Payable	21001		955 00
	Due to SearchIt for search engine			
	advertising			
16	*Accounts Receivable*	12001	35250 00	
	Cost of Goods Sold	51001	13395 00	
	Sales Revenue	41001		35250 00
	Inventory	14001		13395 00
	To record sales of $35,250, cost of sales			
	$13,395			
16	*Shipping-out Expense*	51002	1035 00	
	Cash	11001		1035 00
	Shipping-out costs for merchandise			
	shipped to customers			
20	*Accounts Receivable*	12001	42500 00	
	Cost of Goods Sold	51001	16150 00	
	Sales Revenue	41001		42500 00
	Inventory	14001		16150 00
	To record sales of $42,500, cost of sales			
	$16,150			
20	*Shipping-out Expense*	51002	1410 00	
	Cash	11001		1410 00
	Shipping-out costs for merchandise			

General Journal **Page 4**

Date		Account Titles and Explanations	A/C#	Debit	Credit
	25	Accounts Payable	21001	689.00	
		Cash	11001		689.00
		Paid to Watt Energy			
	26	Cash	11001	15500.00	
		Accounts Receivable	12001		15500.00
		Cash of $15,500 collected from A/R			
	29	Cash	11001	21550.00	
		Accounts Receivable	12001		21550.00
		Cash of $21,550 collected from A/R			
	30	Accounts Payable	21001	1400.00	
		Cash	11001		1400.00
		Paid to Elite Productions and			
		SearchIt			
	30	Accounts Payable	21001	55000.00	
		Cash	11001		55000.00
		Paid to F & E Assoc.			
	30	Salaries & Wages Expense	52001	5000.00	
		Cash	11001		5000.00
		Salaries and wages paid for the			
		month of June 20X1			

The transactions in the General Journal are posted as additional entries to the ledgers posted previously, so those earlier postings are repeated here. To conserve space, only the new ledger accounts and those that are changed in this posting session are shown. The new entries are in bold face.

ACCOUNT: CASH **ACCOUNT NO.: 11001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
	1	Stock sale	1	500000 00		500000 00	Dr
	2	Purch land & bldg.	1		300000 00	200000 00	Dr
	15	Sale of 25% of land	1	25000 00		225000 00	Dr
	31	Sal/Wges-May 20X1	2		5000 00	220000 00	Dr
June	2	Shipping-out paid	2		565 00	219435 00	Dr
	12	Shipping-out paid	3		690 00	218745 00	Dr
	16	Shipping-out paid	3		1035 00	217710 00	Dr
	20	Shipping-out paid	3		1410 00	216300 00	Dr
	25	Watt Energy	4		689 00	215611 00	Dr
	26	A/R collected	4	15500 00		231111 00	Dr
	29	A/R collected	4	21550 00		252661 00	Dr
	30	Elite Prod./SearchIt	4		1400 00	251261 00	Dr
	30	F & E Assoc.	4		55000 00	196261 00	Dr
	30	Sal/Wges-June 20X1	4		5000 00	191261 00	Dr

ACCOUNT: ACCOUNTS RECEIVABLE **ACCOUNT NO.: 12001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	2	Sales on account	2	12600 00		12600 00	Dr
	12	Sales on account	2	20800 00		33400 00	Dr
	16	Sales on account	3	35250 00		68650 00	Dr
	20	Sales on account	3	42500 00		111150 00	Dr
	26	Cash collected	4		15500 00	95650 00	Dr
	29	Cash collected	4		21550 00	74100 00	Dr

ACCOUNT: INVENTORY **ACCOUNT NO.: 14001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	20	Inventory purch.	1	50000.00		50000.00	Dr
	25	Inventory returned	1		500.00	49500.00	Dr
June	2	Inventory sold	2		4800.00	44700.00	Dr
	12	Inventory sold	2		7900.00	36800.00	Dr
	16	Inventory sold	3		13395.00	23405.00	Dr
	20	Inventory sold	3		16150.00	7255.00	Dr

ACCOUNT: ACCOUNTS PAYABLE **ACCOUNT NO.: 21001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	16	Due to F&E Assoc.	1		55000.00	55000.00	Cr
	20	Due to Half's Whlsl.	1		50000.00	105000.00	Cr
	25	Returned to Half's	1	500.00		104500.00	Cr
June	9	Due to Watt Energy	2		689.00	105189.00	Cr
	15	Due to Elite Prod.	3		445.00	105634.00	Cr
	15	Due to SearchIt	3		955.00	106589.00	Cr
	25	Paid to Watt Energy	4	689.00		105900.00	Cr
	30	Pd to Elite/SearchIt	4	1400.00		104500.00	Cr
	30	Paid to F & E Assoc.	4	55000.00		49500.00	Cr

ACCOUNT: SALES REVENUE **ACCOUNT NO.: 41001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	2	Sales on account	2		12600.00	12600.00	Cr
	12	Sales on account	2		20800.00	33400.00	Cr
	16	Sales on Account	3		35250.00	68650.00	Cr
	20	Sales on Account	3		42500.00	111150.00	Cr

ACCOUNT: COST OF GOODS SOLD **ACCOUNT NO.: 51001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	2	Cost of sales	2	4800 00		4800 00	Dr
	12	Cost of sales	2	7900 00		12700 00	Dr
	16	Cost of sales	3	13395 00		26095 00	Dr
	20	Cost of sales	3	16150 00		42245 00	Dr

ACCOUNT: SHIPPING-OUT EXPENSE **ACCOUNT NO.: 51002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	2	Shipping to cust.	2	565 00		565 00	Dr
	12	Shipping to cust.	3	690 00		1255 00	Dr
	16	Shipping to cust.	3	1035 00		2290 00	Dr
	20	Shipping to cust.	3	1410 00		3700 00	Dr

ACCOUNT: SALARIES & WAGES EXPENSE **ACCOUNT NO.: 52001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
May	31	Sal/Wges-May 20X1	2	5000 00		5000 00	Dr
June	30	Sal/Wges-June 20X1	4	5000 00		10000 00	Dr

ACCOUNT: UTILITIES EXPENSE **ACCOUNT NO.: 53002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	9	Watt Energy-elec.	2	689 00		689 00	Dr

ACCOUNT: ADVERTISING MEDIA EXPENSE **ACCOUNT NO.: 54001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	15	SearchIt advert.	3	9 5 5 00		9 5 5 00	Dr

ACCOUNT: ADVERTISING PRODUCTION EXPENSE **ACCOUNT NO.: 54002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	15	Elite Productions	3	4 4 5 00		4 4 5 00	Dr

Unadjusted Trial Balance

An unadjusted trial balance prepared as of June 30, 20X1, including all the transactions posted since May 1, follows. The new accounts and accounts with changed balances are in bold face. Although the Retained Earnings account has a zero balance (and will continue to have a zero balance until the year-end close), it is in bold face too because it is new.

Greenworks Distribution Company Trial Balance (Unadjusted) June 30, 20X1			
Account Number	Account Name	Debits	Credits
11001	**Cash**	**191,261.00**	
12001	**Accounts Receivable**	**74,100.00**	
14001	**Inventory**	**7,255.00**	
17101	Land	75,000.00	
17201	Buildings	200,000.00	
17301	Furniture & Equipment	55,000.00	
21001	**Accounts Payable**		**49,500.00**
31001	Common Stock		50,000.00
31002	Additional Paid-in Capital		450,000.00
32001	**Retained Earnings**		**0.00**
41001	**Sales Revenue**		**111,150.00**
51001	**Cost of Goods Sold**	**42,245.00**	
51002	**Shipping-out Expense**	**3,700.00**	
52001	**Salaries & Wages Expense**	**10,000.00**	
53002	**Utilities Expense**	**689.00**	
54001	**Advertising Media Expense**	**955.00**	
54002	**Advertising Production Expense**	**445.00**	
Totals		660,650.00	660,650.00

Study Unit 9: A.2. Other Transactions with Example

Other kinds of transactions include investing transactions, financing transactions, payments made in advance of receiving the benefit from the payment, and payment of a dividend to shareholders.

Investing Transactions

Excess cash should be invested to earn a return. However, cash needed for operating purposes should not be put at risk in an investment that could lose value. **Cash equivalents** can be used to earn a return on excess cash for short periods with minimal risk until the cash is needed for operations. Cash equivalents are very liquid, short-term investment instruments with a maturity date of less than 90 days when they are acquired that are easily converted into known amounts of cash without significant loss in value.

Greenworks Distribution Company's management decides to invest $100,000 of its excess cash in a money market deposit account (MMDA) at its bank, Safety Bank. The money market deposit account is classified as a cash equivalent, and it will pay 5% interest per annum, calculated as daily interest.

Money market deposit accounts in banks are like savings accounts because they pay interest. They usually offer some limited check-writing privileges, as well. For example, checks written may be required to be for a minimum amount such as $1,000, and the bank may impose restrictions on the number of checks that may be written each month. In the U.S., money market deposit accounts in FDIC-insured banks are included in FDIC insurance coverage up to the standard maximum balance.

Financing Transactions

At times it will be necessary for a company to borrow short-term to provide cash for daily needs or longer-term to finance the purchase of fixed assets.

The management of Greenworks buys some new equipment for $80,000, making an $8,000 down payment and financing the balance with a 5-year term loan from Safety Bank at an interest rate of 6% per annum, secured by the equipment.

Payments Made in Advance

Management of Greenworks purchases an insurance policy to provide liability coverage and cover its property, plant, and equipment. The company pays a premium of $24,000 for one year of coverage beginning June 1, 20X1.

Money Received in Advance Before Goods or Services are Provided

On June 10, Greenworks receives a deposit from Pyramid Products, a customer, in the amount of $5,000 for an item to be special ordered for the customer. The special order price is $10,000, and Greenworks' cost for the item is $4,000.

Payment of a Dividend

When a company has adequate profits and cash to do so, its board of directors may declare a cash dividend for stockholders.

Payment of a dividend is not an expense, and it does not affect net income. However, the declaration of a dividend reduces equity on the balance sheet. When a dividend is declared, the amount declared may be debited directly to the Retained Earnings account (because debits decrease equity accounts), or it may be debited to a separate Dividends account, a temporary contra account[24] in the equity section of the balance sheet. If dividends are debited to a separate Dividends account, the balance in the Dividends account will be closed to the Retained Earnings account in the year-end close, reducing Retained Earnings at that time by the amount of the dividends declared during the year.

Greenworks has had a very successful start, and its board of directors declares a cash dividend of $0.25 per share, payable on June 30, 20X1, to common stockholders of record as of June 15, 20X1. Since 50,000 shares of common stock are outstanding, the dividend payable is 50,000 × $0.25, or $12,500.

In the Greenworks Distribution Company example, a separate Dividends account is used.

[24] A contra account is an account that carries the opposite balance to the normal balance for the type of account it is and reduces the value of another account or accounts when the accounts are netted. The declaration of a cash dividend reduces equity. The normal balance for an equity account is a credit balance, but dividends may be recorded by debiting the Dividends account, a contra-equity account, so the Dividends account carries a debit balance. The Dividends account is a temporary account that is closed to the Retained Earnings account in the year-end close.

Example: Other Transactions

New Ledger accounts

Some new ledger accounts need to be added to the Chart of Accounts for this example. The Chart of Accounts now looks like the following. The new accounts are in bold face.

Greenworks Distribution Company Chart of Accounts		
Account Number	**Account Name**	**Type of Account**
11001	Cash	Asset
11002	**Cash Equivalents**	**Asset**
12001	Accounts Receivable	Asset
14001	Inventory	Asset
15001	**Prepaid Expense**	**Asset**
17101	Land	Asset
17201	Buildings	Asset
17301	Furniture & Equipment	Asset
21001	Accounts Payable	Liability
21003	**Dividends Payable**	**Liability**
21004	**Deferred Revenue**	**Liability**
22001	**Long-term Debt**	**Liability**
31001	Common Stock	Equity
31002	Additional Paid-in Capital	Equity
31003	**Dividends**	**Contra-equity**
32001	Retained Earnings	Equity
41001	Sales Revenue	Revenue
49001	**Interest revenue**	**Revenue**
51001	Cost of Goods Sold	Expense
51002	Shipping-out expense	Expense
52001	Salaries & Wages Expense	Expense
53002	Utilities Expense	Expense
54001	Advertising Media Expense	Expense
54002	Advertising Production Expense	Expense
59001	**Interest Expense**	**Expense**

Date	Description
June 1, 20X1	A money market deposit account (MMDA) is opened at Safety Bank in the amount of $100,000, paying 5% interest per annum, calculated as daily interest.

On June 1, 20X1, the company invests $100,000 of its cash in a money market deposit account (MMDA) offered by Safety Bank, the company's bank, that pays 5% interest per year.

Money market deposit accounts are classified on the balance sheet as **cash equivalents**. The Cash Equivalents account, an asset account, is increased by $100,000, and the Cash account, another asset account, is decreased by $100,000. Assets are increased by debits and decreased by credits, so Cash Equivalents is debited for $100,000 and Cash is credited for $100,000.

Dr Cash Equivalents 100,000.00
Cr Cash...100,000.00

Date	**Description**
June 1, 20X1	Automated warehouse picking equipment is purchased for $80,000, and management estimates it will save the company $12,000 per year. Management finances the purchase with a five-year equipment loan from Safety Bank at an interest rate of 6% per annum, secured by the equipment. Safety Bank requires a down payment of 10%, or $8,000, so the loan is for $72,000. Greenworks agrees to make 60 level principal payments of $1,200 per month, due on the last day of each month, plus interest.

The asset account, Equipment, is increased by $80,000 to reflect the cost of the new equipment. A debit increases an asset account, so Greenworks debits the Equipment account for $80,000. Cash in the amount of $8,000 is paid as the down payment. Since assets are decreased by credits, the Cash account is credited for $8,000.

Long-term debt is increased by $72,000 to record the new term loan. Liabilities are increased by credits, so the Long-Term Liability account is credited for $72,000.

Dr Furniture & Equipment.. 80,000.00
Cr Long-term debt.. 72,000.00
Cr Cash.. 8,000.00

Note that the debit is equal to the sum of the two credits.

Date	**Description**
June 1, 20X1	An insurance policy is purchased to cover property, plant, and equipment and provide liability coverage. The premium paid is $24,000 and the policy period is for one year beginning June 1.

When the accrual basis of accounting is used, expenses are recognized when the revenues for which they were incurred are recognized; or, if the expenses cannot be directly related to the production of revenues, the expenses are recognized when the good or service is received and the liability for payment is incurred.

Insurance premiums are paid in advance of the policy period, so the benefit from the insurance coverage is received over the term of the policy. Therefore, the advance payment is not charged to an expense account at the time it is made. Instead, the **Prepaid Expense** account, an asset account, is increased (debited). The Cash account is decreased (credited) for the amount paid.

Dr Prepaid Expense 24,000.00
Cr Cash... 24,000.00

The expense will be recognized over the term of the policy by debiting an expense account (to increase it) and crediting the Prepaid Expense account (to decrease it).

Date	**Description**
June 10, 20X1	Pyramid Products pays a $5,000 deposit for a special ordered item, Stock No. A340, priced at $10,000 and expected to be received by June 25, 20X1. The special order is placed with Half's Wholesale, a major supplier.

The money received is recorded as a credit to a liability account, Deferred Revenue, because in exchange for the cash received in partial payment, Greenworks has an obligation to provide the special ordered item to the customer when it is received.

		Dr	Cr
Dr	Cash	5,000.00	
Cr	Deferred revenue		5,000.00

Date	**Description**
June 15, 20X1	A cash dividend of $0.25 per share is declared by the board of directors. The total dividend declared is $12,500 (50,000 shares outstanding × $0.25 per share).

Dividends decrease equity, so the Dividends account, a contra-equity account, is debited for $12,500. Debiting an equity account decreases it, and as a contra-equity account, the Dividends account will have only debit entries. The dividend is payable on June 30, so on June 15, Dividends Payable, a liability account, is credited to increase it.

		Dr	Cr
Dr	Dividends	12,500.00	
Cr	Dividends payable		12,500.00

Date	**Description**
June 25, 20X1	The special order expected for Pyramid Products, Stock No. A340, is received from Half's Wholesale. The item's cost of $4,000 is added to inventory and the payable to Half's Wholesale is recorded. The item is shipped to the customer and shipping cost of $100 is paid. The customer is invoiced for the shipment.

When the order is shipped and invoiced, the Deferred Revenue account is debited for the $5,000 deposit received for the order, reducing the balance in the account to zero. Accounts Receivable is debited for the remaining $5,000 due from the customer, and the total sale price of $10,000 is credited to Revenue. The shipping out charges of $100 are paid in cash. Note that the receivable is only $5,000, because $5,000 of the $10,000 sale amount was received on June 10.

		Dr	Cr
Dr	Inventory	4,000.00	
Cr	Accounts payable		4,000.00

To record receipt of Stock No. A340 from Half's Wholesale for Pyramid Products.

		Dr	Cr
Dr	Accounts receivable	5,000.00	
Dr	Deferred revenue	5,000.00	
Dr	Cost of goods sold	4,000.00	
Cr	Sales Revenue		10,000.00
Cr	Inventory		4,000.00

To record sale of special order item Stock No. A340 to Pyramid Products.

		Dr	Cr
Dr	Shipping-out expense	100.00	
Cr	Cash		100.00

To record shipping expense for special order item Stock No. A340 to Pyramid Products.

Date	Description
June 30, 20X1	Interest is earned for 30 days on the $100,000 money market deposit account balance at an annual rate of 5%. The interest revenue is calculated as $100,000 × 0.05 annual interest ÷ 365 days in a year × 30 days in June = $410.96. Safety Bank adds the interest earned to the balance in the company's money market deposit account on June 30.

Interest earned on an investment is interest revenue. Since the interest revenue was added to the account by the bank, Greenworks debits the asset account Cash Equivalents for $410.96 to increase it by the interest. Interest Revenue is increased by $410.96. Since revenues are increased by credits, the Interest Revenue account is credited for $410.96.

Dr Cash equivalents...410.96
Cr Interest revenue 410.96

Date	Description
June 30, 20X1	The first payment is due on the equipment loan. Safety Bank issues an invoice for the $1,200 principal payment due plus interest for one month, calculated as $72,000 × 0.06 annual interest ÷ 365 days in a year × 30 days in June = $355.07. The total payment made is $1,555.07.

Interest on a loan is interest expense, and expenses are increased by debits. Therefore, the Interest Expense account is debited for $355.07. The principal payment reduces the liability account, Long-Term Debt, and debits decrease liabilities. Therefore, the Long-Term Debt account is debited for $1,200. Cash of $1,555.07 is paid to Safety Bank, so the Cash account is decreased by $1,555.07. Cash is an asset and assets are decreased by credits, so the Cash account is credited for $1,555.07.

Dr Long-term debt 1,200.00
Dr Interest expense...355.07
Cr Cash.. 1,555.07

Note that the sum of the two debits is equal to the amount of the credit.

Date	Description
June 30, 20X1	The dividend payable in the amount of $12,500 is paid.

Dividends Payable, a liability account, is debited for $12,500 to decrease it, and the Cash account, an asset account, is credited for $12,500 to decrease it.

Dr Dividends payable.. 12,500.00
Cr Cash.. 12,500.00

The transactions above are added to the General Journal as follows.

General Journal **Page 5**

Date		Account Titles and Explanations	A/C#	Debit	Credit
June	1	Cash Equivalents	11002	100000 00	
		Cash	11001		100000 00
		Money market deposit account opened			
		at Safety Bank			
	1	Furniture & Equipment	17301	80000 00	
		Long-term Debt	22001		72000 00
		Cash	11001		8000 00
		Automated warehouse picking			
		equipment purchased, $8,000 down			
		payment, $72,000 borrowed from			
		Safety Bank for 5 years on term note			
		at 6% per annum			
	1	Prepaid Expense	15001	24000 00	
		Cash	11001		24000 00
		Insurance policy purchased - 1 year			
June	10	Cash	11001	5000 00	
		Deferred Revenue	21004		5000 00
		Deposit received from Pyramid Prod.			
June	15	Dividends	31003	12500 00	
		Dividends Payable	21003		12500 00
		Dividend of $0.25 per share declared			
		on 50,000 common shares			
June	25	Inventory	14001	4000 00	
		Accounts Payable	21001		4000 00
		Stock No. A340 received for Pyramid			
		from Half's Wholesale			

General Journal **Page 6**

Date		Account Titles and Explanations	A/C#	Debit	Credit
June	25	Accounts Receivable	12001	5000.00	
		Deferred Revenue	21004	5000.00	
		Cost of Goods Sold	51001	4000.00	
		Revenue	41001		10000.00
		Inventory	14001		4000.00
		Sale of Stock No. A340 to Pyramid			
June	25	Shipping-Out Expense	51002	100.00	
		Cash	11001		100.00
		Shipping expense for Pyramid order			
	30	Cash Equivalents	11002	410.96	
		Interest Revenue	49001		410.96
		Interest earned on money market			
		deposit account at Safety Bank at 5%			
		per annum for June 1-30, 20X1			
	30	Long-term Debt	22001	1200.00	
		Interest Expense	59001	355.07	
		Cash	11001		1555.07
		Payment made to Safety Bank on			
		term note for warehouse equipment:			
		principal $1,200.00 plus interest			
		of $355.07 for June 1-30, 20X1			
	30	Dividends Payable	21003	12500.00	
		Cash	11001		12500.00
		Dividend of $0.25 per share on 50,000			
		common shares paid			

The above transactions are posted to ledger accounts as follows. Only the ledger accounts that are changed in this posting are shown to conserve space. The new entries are in bold face.

ACCOUNT: CASH **ACCOUNT NO.: 11001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	1	Stock sale	1	500000.00		500000.00	Dr
	2	Purch land & bldg.	1		300000.00	200000.00	Dr
	15	Sale of 25% of land	1	25000.00		225000.00	Dr
	31	Sal/Wges-May 20X1	2		5000.00	220000.00	Dr
June	1	Xfer to MMDA	5		100000.00	120000.00	Dr
	1	Down pmt. on equip	5		8000.00	112000.00	Dr
	1	Ins. policy purch.	5		24000.00	88000.00	Dr
June	2	Shipping-out paid	2		565.00	87435.00	Dr
	10	Dep. recd-Pyramid	5	5000.00		92435.00	Dr
	12	Shipping-out paid	3		690.00	91745.00	Dr
	16	Shipping-out paid	3		1035.00	90710.00	Dr
	20	Shipping-out paid	3		1410.00	89300.00	Dr
	25	Watt Energy	3		689.00	88611.00	Dr
	25	Ship to Pyramid	6		100.00	88511.00	Dr
	26	A/R collected	4	15500.00		104011.00	Dr
	29	A/R collected	4	21550.00		125561.00	Dr
	30	Elite Prod./SearchIt	3		1400.00	124161.00	Dr
	30	F & E Assoc.	3		55000.00	69161.00	Dr
	30	Sal/Wges-June 20X1	3		5000.00	64161.00	Dr
	30	Pmt.-Safety Bk loan	6		1555.07	62605.93	Dr
	30	Dividend paid	6		12500.00	50105.93	Dr

ACCOUNT: CASH EQUIVALENTS **ACCOUNT NO.: 11002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	1	Invest in MMDA	5	100000.00		100000.00	Dr
	30	Int earned-MMDA	6	410.96		100410.96	Dr

ACCOUNT: ACCOUNTS RECEIVABLE **ACCOUNT NO.: 12001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	2	Sales on account	2	12600.00		12600.00	Dr
	12	Sales on account	2	20800.00		33400.00	Dr
	16	Sales on account	3	35250.00		68650.00	Dr
	20	Sales on account	3	42500.00		111150.00	Dr
	25	**Sl on a/c-Pyramid**	**6**	**5000.00**		**116150.00**	**Dr**
	26	Cash collected	4		15500.00	100650.00	Dr
	29	Cash collected	4		21550.00	79100.00	Dr

ACCOUNT: INVENTORY **ACCOUNT NO.: 14001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	20	Inventory purch.	1	50000.00		50000.00	Dr
	25	Inventory returned	1		500.00	49500.00	Dr
June	2	Inventory sold	2		4800.00	44700.00	Dr
	12	Inventory sold	2		7900.00	36800.00	Dr
	16	Inventory sold	3		13395.00	23405.00	Dr
	20	Inventory sold	3		16150.00	7255.00	Dr
	25	**Inv. purch-Pyramid**	**5**	**4000.00**		**11255.00**	**Dr**
	25	**Inv. sold-Pyramid**	**6**		**4000.00**	**7255.00**	**Dr**

ACCOUNT: PREPAID EXPENSE **ACCOUNT NO.: 15001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	1	Ins. policy purch.	5	24000.00		24000.00	Dr

ACCOUNT: FURNITURE & EQUIPMENT **ACCOUNT NO.: 17301**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	14	F & E purchased	1	55000.00		55000.00	Dr
June	1	Warehse. equip pur.	5	80000.00		135000.00	Dr

ACCOUNT: ACCOUNTS PAYABLE **ACCOUNT NO.: 21001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	16	Due to F&E Assoc.	1		55000.00	55000.00	Cr
	20	Due to Half's Whlsl.	1		50000.00	105000.00	Cr
	25	Returned to Half's	1	500.00		104500.00	Cr
June	9	Due to Watt Energy	2		689.00	105189.00	Cr
	15	Due to Elite Prod.	3		445.00	105634.00	Cr
	15	Due to SearchIt	3		955.00	106589.00	Cr
	25	Paid to Watt Energy	4	689.00		105900.00	Cr
	25	Due to Half's	5		4000.00	109900.00	Cr
	30	Pd to Elite/SearchIt	4	1400.00		108500.00	Cr
	30	Paid to F & E Assoc.	4	55000.00		53500.00	Cr

ACCOUNT: DIVIDENDS PAYABLE **ACCOUNT NO.: 21003**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	15	Dividend declared	5		12500.00	12500.00	Cr
	30	Dividend paid	6	12500.00		0.00	

ACCOUNT: DEFERRED REVENUE **ACCOUNT NO.: 21004**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	10	Dep. recd.-Pyramid	5		4000.00	4000.00	Cr
	25	Shipmt to Pyramid	6	4000.00		0.00	

ACCOUNT: LONG-TERM DEBT **ACCOUNT NO.: 22001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	1	Term Ln-Safety Bnk	5		72000.00	72000.00	Cr
	30	Prin. pmt.-Safety ln	6	1200.00		70800.00	Cr

ACCOUNT: DIVIDENDS (CONTRA-EQUITY) **ACCOUNT NO.: 31003**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	15	Dividend declared	5	12500.00		12500.00	Dr

ACCOUNT: SALES REVENUE **ACCOUNT NO.: 41001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	2	Sales on account	2		12600.00	12600.00	Cr
	12	Sales on account	2		20800.00	33400.00	Cr
	16	Sales on Account	3		35250.00	68650.00	Cr
	20	Sales on Account	3		42500.00	111150.00	Cr
	25	Sl on a/c-Pyramid	6		10000.00	121150.00	Cr

ACCOUNT: INTEREST REVENUE **ACCOUNT NO.: 49001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	30	Int on MMDA	6		410.96	410.96	Cr

ACCOUNT: COST OF GOODS SOLD **ACCOUNT NO.: 51001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	2	Cost of sales	2	4800.00		4800.00	Dr
	12	Cost of sales	2	7900.00		12700.00	Dr
	16	Cost of sales	3	13395.00		26095.00	Dr
	20	Cost of sales	3	16150.00		42245.00	Dr
	25	Cost of sl-Pyramid	6	4000.00		46245.00	Dr

ACCOUNT: SHIPPING-OUT EXPENSE **ACCOUNT NO.: 51002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	2	Shipping to cust.	2	565.00		565.00	Dr
	12	Shipping to cust.	3	690.00		1255.00	Dr
	16	Shipping to cust.	3	1035.00		2290.00	Dr
	20	Shipping to cust.	3	1410.00		3700.00	Dr
	25	Ship to Pyramid	6	100.00		3800.00	Dr

ACCOUNT: INTEREST EXPENSE **ACCOUNT NO.: 59001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	30	Int on term loan	6	355.07		355.07	Dr

Unadjusted Trial Balance

A revised unadjusted trial balance prepared as of June 30, 20X1, incorporating the insurance purchase, the money market deposit account investment and earnings, the equipment purchase, and the term loan transactions, is as follows. The new accounts and accounts with changed balances are in bold face.

Greenworks Distribution Company
Trial Balance (Unadjusted)
June 30, 20X1

Account Number	Account Name	Debits	Credits
11001	**Cash**	**50,105.93**	
11002	**Cash Equivalents**	**100,410.96**	
12001	**Accounts Receivable**	**79,100.00**	
14001	Inventory	7,255.00	
15001	**Prepaid Expense**	**24,000.00**	
17101	Land	75,000.00	
17201	Buildings	200,000.00	
17301	**Furniture & Equipment**	**135,000.00**	
21001	**Accounts Payable**		**53,500.00**
21003	**Dividends Payable**		**0.00**
21004	**Deferred Revenue**		**0.00**
22001	**Long-term Debt**		**70,800.00**
31001	Common Stock		50,000.00
31002	Additional Paid-in Capital		450,000.00
31003	**Dividends**	**12,500.00**	
32001	Retained Earnings		0.00
41001	Sales Revenue		121,150.00
49001	**Interest Revenue**		**410.96**
51001	**Cost of Goods Sold**	**46,245.00**	
51002	**Shipping-out Expense**	**3,800.00**	
52001	Salaries & Wages Expense	10,000.00	
53002	Utilities Expense	689.00	
54001	Advertising Media Expense	955.00	
54002	Advertising Production Expense	445.00	
59001	**Interest Expense**	**355.07**	
Totals		745,860.96	745,860.96

Study Unit 10: A.2. Adjusting Entries

Accounting Periods

To make accounting measurements and prepare financial statements, a business's financial reporting is divided into accounting periods of equal length. The equal length enables comparisons of operating results for the current period with results of prior periods for analysis purposes.

An **accounting period** is the time covered by an income statement. The usual accounting period for which financial statements are published is one year, but interim financial statements are also prepared and published. Publicly held corporations publish quarterly financial statements, and companies frequently prepare monthly financial statements as well for internal use and decision making. In the U.S., taxable income is measured and reported annually to the Internal Revenue Service, but estimated taxes must be paid periodically throughout the year, so estimates of the year's taxable income are also needed throughout the year.

To serve the needs of users of financial statements, the financial statements must be complete and accurate. The balance sheet must report all the assets and liabilities of the reporting entity as of the close of business on the last day of the period. The income statement must report all the revenues, gains, expenses, and losses applicable to the period covered and must not contain any of those items relating to either a prior period or a future period. Therefore, for the financial statements to be accurate, a precise cutoff of transactions at the end of the period is necessary, and some adjusting entries are necessary.

The Accounting Cycle: Step 5 – Make Adjusting Entries

Note: This is the **fifth** of the eight steps in the accounting cycle.

Some business transactions occur completely within one accounting period, but others may be begun in one accounting period and completed in a later period or periods. The effect on the financial statements needs to be apportioned to the correct accounting periods. Adjusting entries are used to update accounts with any transactions that are applicable to the current accounting period but have not been recognized in the current period.

Recall that the first step in the accounting cycle is identifying and analyzing financial events, and events are recorded as transactions based on information from original source documents, such as an invoice or an employee's time sheet. However, many times, original source documents will not be available to support adjusting entries.

For example, a building will last for many years, and during each year, a portion of the building's cost should be recognized as an expense. That expense is called depreciation, and adjusting entries are used to record the depreciation expense applicable to the current accounting period. But aside from a depreciation worksheet showing scheduled depreciation charges, no original source document exists for the regular depreciation transaction.

Adjusting entries may be needed for revenue items because of the revenue recognition principle and for expense items because of the matching principle.

The **revenue recognition principle** states that revenue is to be recognized in the accounting period in which the performance obligation to the customer is satisfied. A performance obligation is satisfied when the customer obtains control of the asset, and the asset is the good or service transferred to the customer. Revenue should be recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration that the company expects to be entitled to receive in exchange for those goods or services.

The **expense recognition principle**, commonly called the **matching principle**, states that recognition of expenses is generally related to net changes in assets and the earning of revenues. Usually, the expense recognition principle is implemented by matching efforts (or expenses) with accomplishments (or revenues), though other standards are used if an expense cannot be directly related to revenues earned.

Expenses are recognized based on one of the following three methods:

1) **Cause and effect**: Expenses should be recognized when they are incurred as a result of transferring control of goods or services to customers and recognizing the associated revenue. Thus, the cost of an item sold is recognized as cost of goods sold when the sale of the item contributes to revenue.

2) **Systematic and rational allocation**: For example, depreciation of fixed assets is related to net changes in assets.

3) **Immediate recognition**: if an expense will not provide future benefit, it is recognized immediately as incurred.

Adjusting entries may also be needed to report assets and liabilities at their correct valuations. Adjusting entries need to be calculated, journalized, and posted at the end of each accounting period. Some adjusting entries may also need to be recorded at the end of each quarter or each month for interim financial reporting to ensure that the interim financial statements report correct amounts.

Note: Interim financial statements are financial statements that cover periods of less than a fiscal year.

Types of Adjusting Entries

The principal types of transactions that require adjusting entries are recorded costs and recorded receipts that need to be apportioned as expenses or revenue between or among two or more accounting periods; unrecorded expenses that need to be recognized; unrecorded revenue that needs to be recognized; and asset valuation adjustments. While not an exhaustive list, the most common adjusting entries needed are used to record:

- Depreciation
- Deferred revenues (including contract liabilities)
- Accrued expenses
- Deferred expenses
- Accrued revenues (including conditional contract assets)
- Asset valuation adjustments

Depreciation is used to allocate costs for fixed assets to the appropriate accounting periods. When a fixed asset is purchased, its cost is debited to a fixed asset account on the balance sheet, called **capitalizing** the asset. As buildings, furniture, and equipment that have been capitalized are used over their lives, a portion of their cost is recognized in each accounting period as **depreciation**[25] while the offsetting credit is to the appropriate Accumulated Depreciation account, a **valuation account**. The Accumulated Depreciation account is a **contra-asset account.** It is an account in the asset section of the balance sheet that carries a credit balance (a "minus" balance because its balance is the opposite of the normal debit balance for an asset account). The Accumulated Depreciation account follows its related fixed asset account in the Chart of Accounts.

[25] Land is not depreciated, because land is not used up and does not wear out.

The credit balance in the Accumulated Depreciation account is presented as a negative amount on a balance sheet. When the credit balance in the Accumulated Depreciation account is deducted from the debit balance in the related fixed asset account, the value of the fixed asset on the balance sheet is decreased. The original document evidencing the transfer of title to the asset is the source document for the initial capitalization, but only a depreciation worksheet serves as the backup for the regular depreciation charges.

Deferred revenues, such as money collected in advance for assets or services to be transferred to the customer in a future period, called **contract liabilities**. A contract liability represents the company's obligation to transfer the goods or services in the future. When the payment is received, the check or other form of payment serves as the original source document to record the receipt. The Cash account is debited and a liability account, Contract Liabilities, is credited for the amount received. When the company performs the obligation, the company can recognize the advance payment received as revenue by debiting the Contract Liabilities account and crediting Revenue. However, documentation of the company's having fulfilled the performance obligation may be lacking.

Accrued expenses are a type of transaction for which a source document may not exist. Accrued expenses are costs incurred by the company during the current accounting period, and they need to be recorded even if an invoice has not been received as of the end of the accounting period. Since the costs have been incurred, the expenses and the liabilities for those expenses need to be recognized in the financial statements as of the end of the period. A worksheet showing how the estimated expense was calculated serves as the documentation for an accrued expense transaction.

An example of such costs is electricity used through the end of the accounting period, even though the electric company's billing period may not have been completed and an invoice may not have been created by the electric company as of the end of the accounting period. An estimated amount needs to be debited to the relevant expense account such as Utilities Expense and credited to the appropriate liability account such as Accounts Payable. Another example is income taxes due on the current period's taxable income. The estimated amount should be debited to the Income Tax Expense account and credited to the Income Taxes Payable account, a liability account, as of the end of the period. Accrued expenses can also include accrued interest payable on liabilities such as loans payable, even though an invoice for the interest has not yet been received. The accrued interest is recognized by debiting Interest Expense and crediting Interest Payable, a liability account.

Deferred expenses such as **prepaid expense** need to be recognized in the correct period. When a company makes a payment in advance of receiving a good or a service, such as an insurance premium or a rent payment, the check or other evidence of the payment and an invoice, if it exists, is the source document for recording the payment made. But it is not recognized as an expense immediately. Because the benefit from the payment will be received over time, the expense needs to be recognized over time. The payment is recorded as a debit to the Prepaid Expense account, an asset account, and a credit to the Cash account. At the end of each accounting period, the cost of the portion of the goods or services that have been received or consumed in the current period must be recorded as an expense of the current period, although there will probably not be any source document to show how much has been used or consumed. The portion of the advance payment applicable to the current period is debited to an appropriate expense account such as Insurance Expense or Rent Expense to apportion the proper amount of expense to current operations. The offsetting credit is to Prepaid Expense to reduce that asset account to the amount representing the benefit still to be received from the advance payment.

Accrued revenues, such as **conditional contract assets**. Conditional contract assets are rights to receive consideration because the company has satisfied one or more of its performance obligations in a contract, but it must satisfy other obligations before it can invoice the customer. The company recognizes the revenue it is due for the performance obligations it has fulfilled by crediting a Revenue account, even though an invoice to the customer that would serve as a source document has not been generated. The offsetting debit is to an asset account, Conditional Contract Assets. Accrued revenues can also include interest and dividends earned on investments during the period. The interest or dividend earned is recorded by crediting the appropriate revenue account and debiting a receivable (asset) account, although a statement serving as a source document may or may not be available.

Asset valuation adjustments may be needed. For example, the ending inventory balance may need adjustment after the physical inventory has been taken, to adjust the ending inventory balance to match the cost of the ending inventory found in the physical inventory. Other asset valuations may need to be adjusted as well.

> **Note**: At the beginning of the following month, quarter, or fiscal year, special attention is required to certain adjusting entries to prevent double counting of some of the amounts recorded. An example is an accrued expense for which a regular invoice will be received and processed in the normal way during the following month. When the invoice is received, the portion of the amount invoiced that was recorded as an accrued expense during the previous period should not be recognized again as an expense in the subsequent period.
>
> The process for "adjusting the adjusting entries" is described later.

Study Unit 11: A.2. Example: Adjusting Entries

Greenworks Distribution Company's management has selected June 30 as the company's fiscal year end date. Therefore, its first fiscal year of operation will be a short year, for a period of only two months: May and June 20X1.

The adjusting entries needed by Greenworks as of June 30, 20X1 include the following:

- Depreciation of building, furniture, and equipment
- Adjust inventory cost to match the year-end physical inventory count and cost
- Insurance adjustment to expense the portion of the prepaid premium used during the current period
- Accrue utilities expense to recognize electricity used but not yet billed during the current period
- Accrue income tax expense to recognize income tax due for the first, short, tax year.

Note: To avoid double-counting of an accrued expense that will later be included on an invoice received from the supplier, a reversing entry will be posted during the subsequent period for the accrued utilities expense. Reversing entries are covered in Study Unit 13.

New Ledger Accounts

The Chart of Accounts that will be used for this example includes some new ledger accounts. The new accounts are in bold face.

Greenworks Distribution Company Chart of Accounts		
Account Number	**Account Name**	**Type of Account**
11001	Cash	Asset
11002	Cash Equivalents	Asset
12001	Accounts Receivable	Asset
14001	Inventory	Asset
15001	Prepaid Expense	Asset
17101	Land	Asset
17201	Buildings	Asset
17299	**Accumulated Depreciation-Buildings**	**Contra-asset**
17301	Furniture & Equipment	Asset
17399	**Accumulated Depreciation-Furn. & Equip.**	**Contra-asset**
21001	Accounts Payable	Liability
21002	**Income Taxes Payable**	**Liability**
21003	Dividends Payable	Liability
21004	Deferred Revenue	Liability
22001	Long-term Debt	Liability
31001	Common Stock	Equity
31002	Additional Paid-in Capital	Equity
31003	Dividends	Contra-equity
32001	Retained Earnings	Equity
41001	Sales Revenue	Revenue
49001	Interest revenue	Revenue
51001	Cost of Goods Sold	Expense
51002	Shipping-out expense	Expense
52001	Salaries & Wages Expense	Expense
53002	Utilities Expense	Expense
54001	Advertising Media Expense	Expense
54002	Advertising Production Expense	Expense
55001	**Insurance Expense**	**Expense**
56001	**Depreciation Expense**	**Expense**
59001	Interest Expense	Expense
59002	**Income Tax Expense**	**Expense**

The adjusting entries are as follows.

Depreciation

Date	Description
June 30, 20X1	Depreciation expense on the building is $427. Depreciation on the first purchase of furniture and equipment is $833. Depreciation on the warehouse picking equipment is $833. Total depreciation expense is $2,093.

The calculation of the depreciation expense is not included here. Depreciation calculations will be covered later in Section B of this textbook.

Fixed assets are initially recorded in a fixed asset account at their historical costs, and the balance in that account is not adjusted. Subsequently, the assets' book values are decreased by means of a valuation account called Accumulated Depreciation, to reflect the "using up" and wearing out of the assets. An Accumulated Depreciation account follows its related fixed asset account in the general ledger.

Depreciation is usually recorded in the accounting system by debiting an expense account, Depreciation Expense.[26] The other side of the entry is a credit to Accumulated Depreciation. Depreciation is recorded for each capitalized fixed asset ("capitalized" means the asset is carried on the balance sheet) on a regular basis according to a depreciation schedule that is established when the asset was purchased. Depreciation may be recorded at the end of every month, or it may be recorded only when financial statements are to be issued.

The combined balance of an asset account and its related valuation account is called the **book value** or **carrying value** of the asset.

Greenworks maintains only one ledger account for depreciation expense, though a company can have multiple depreciation expense accounts if management wishes to segregate the depreciation expense on the income statement according to type of fixed asset being depreciated.

Since the depreciation expensed for Greenworks' buildings and its furniture and equipment is all recorded in a single ledger expense account, the calculated depreciation amounts are combined, and the Depreciation Expense account is debited for $2,093. The Accumulated Depreciation-Buildings account, the contra-asset account to the Buildings account, is credited for the building depreciation of $427. The Accumulated Depreciation-Furniture & Equipment account is credited for the depreciation on the first furniture and equipment purchase and for the depreciation on the warehouse picking equipment, a total of $1,666.

The credits to the accumulated depreciation contra-asset accounts increase the **credit** balances of those accounts. The credit balances are **negative** amounts in the asset section of the balance sheet accounts, because the normal balance for an asset account is a debit balance. Thus, they serve to decrease the valuations of the assets on the balance sheet.

Dr Depreciation Expense 2,093.00
Cr Accumulated Depreciation-Building................................ 427.00
Cr Accumulated Depreciation-Furniture & Equipment 1,666.00

Note that the land is not depreciated. Land is never depreciated because land is not used up and does not wear out.

[26] Depreciation on fixed assets used in manufacturing becomes part of the cost of the goods manufactured, so it is included on the balance sheet in Inventory until the units it is attached to are sold instead of being expensed immediately. However, that method of accounting for depreciation is outside the scope of the FMAA exam.

Inventory Adjustment

Date	Description
June 30, 20X1	A physical inventory is completed on June 30, and the cost of the inventory on hand is calculated. It is determined that the cost of the inventory according to the physical inventory is $7,100, or $155 less than the balance in the Inventory account.

An adjusting entry is needed to make the balance in the Inventory account match the calculated value according to the physical inventory taken. The Inventory account will be credited for $155 to decrease it to match the cost according to the physical inventory. Because the amount of the adjustment is not unusual, the offsetting debit can go to the Cost of Goods Sold expense account to increase the expense in that account. If the amount of the decrease had been an unusual amount, the debit would have been made to a separate expense account, Inventory Write-offs.

Dr Cost of Goods Sold.. 155.00
Cr Inventory.. 155.00

Prepaid Expense Adjustment

Date	Description
June 30, 20X1	Insurance paid in advance was $24,000 for one year, and it was paid on June 1. Therefore, one month's insurance expense needs to be recognized for the period from June 1 through June 30. $24,000 ÷ 12 = $2,000 expense per month.

Insurance Expense, an expense account, is debited for $2,000 to increase the expense account's balance. The Prepaid Expense account, an asset account, needs to be decreased by the same amount. Assets are decreased by credits, so that account is credited for $2,000.

Dr Insurance Expense.. 2,000.00
Cr Prepaid Expense 2,000.00

Utility and Income Tax Expense Accruals

Date	Description
June 30, 20X1	Utility expense due to Watt Energy for electricity used during the period from June 10 through June 30 is estimated at $465 and the expense is accrued.

Watt Energy's billing period is June 10 through July 9. Therefore, a portion of the bill that will be received in July will be expense for the current fiscal year, and a part will be expense for the next fiscal year. The portion of the bill that will cover the period through June 30 is estimated as $465. The Utilities Expense account is debited to increase it by $465 for the period from the beginning of the billing period, June 10, through June 30, the end of Greenworks' fiscal year. Accounts payable is credited for the same amount to increase it by $465.

Dr Utilities Expense 465.00
Cr Accounts Payable 465.00

Date	Description
June 30, 20X1	Income tax expense is accrued at $11,415 for the fiscal year.

The income tax that will be due when the company files its income tax return has been calculated as $11,415. Income Tax Expense is an expense account, so it is debited for $11,415 to increase it. Income Taxes Payable is a liability account, so it is credited for $11,415 to increase it.

Dr Income Tax Expense 11,415.00
Cr Income Taxes Payable 11,415.00

The transactions above are added to the General Journal as follows.

General Journal **Page 7**

Date		Account Titles and Explanations	A/C#	Debit	Credit
June	30	Depreciation Expense	56001	2093 00	
		Accumulated Depreciation-Buildings	17299		427 00
		Accumulated Depreciation-Furn. & Equip.	17399		1666 00
		Depreciation - FY ended June 30, 20X1			
	30	Cost of Goods Sold	51001	155 00	
		Inventory	14001		155 00
		Adjust inventory to physical count			
		and cost as of June 30, 20X1			
	30	Insurance Expense	55001	2000 00	
		Prepaid Expense	15001		2000 00
		Recognize insurance expense for			
		month of June 20X1			
	30	Utilities Expense	53002	465 00	
		Accounts Payable	21001		465 00
		Accrue utilities expense for period			
		June 10-June 30, 20X1			
	30	Income Tax Expense	59001	11415 00	
		Income Taxes Payable	21002		11415 00
		Accrue income tax expense for			
		fiscal year ended June 30, 20X1			

The above transactions are posted to ledger accounts as follows. To conserve space, only the ledger accounts changed by these transactions are shown. The new transactions are in bold face.

ACCOUNT: INVENTORY **ACCOUNT NO.: 14001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	20	Inventory purch.	1	50000.00		50000.00	Dr
	25	Inventory returned	1		500.00	49500.00	Dr
June	2	Inventory sold	2		4800.00	44700.00	Dr
	12	Inventory sold	2		7900.00	36800.00	Dr
	16	Inventory sold	3		13395.00	23405.00	Dr
	20	Inventory sold	3		16150.00	7255.00	Dr
	25	Inv. purch-Pyramid	5	4000.00		11255.00	Dr
	25	Inv. sold-Pyramid	6		4000.00	7255.00	Dr
	30	**Adjust inventory**	**7**		**155.00**	**7100.00**	**Dr**

ACCOUNT: PREPAID EXPENSE **ACCOUNT NO.: 15001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	1	Ins. policy purch.	4	24000.00		24000.00	Dr
	30	**Ins. exp-FY 20X1**	**7**		**2000.00**	**22000.00**	**Dr**

ACCOUNT: ACCUMULATED DEPRECIATION-BUILDINGS (CONTRA-ASSET) **ACCOUNT NO.: 17299**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	**30**	**Deprec. FY Jun 20X1**	**7**		**427.00**	**427.00**	**Cr**

ACCOUNT: ACCUMULATED DEPRECIATION-FURN. & EQUIP. (CONTRA-ASSET) **ACCOUNT NO.: 17399**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	30	Deprec. FY Jun 20X1	7		1666.00	1666.00	Cr

ACCOUNT: ACCOUNTS PAYABLE **ACCOUNT NO.: 21001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
	16	Due to F&E Assoc.	1		55000.00	55000.00	Cr
	20	Due to Half's Whlsl.	1		50000.00	105000.00	Cr
	25	Returned to Half's	1	500.00		104500.00	Cr
June	10	Due to Watt Energy	2		689.00	105189.00	Cr
	15	Due to Elite Prod.	3		445.00	105634.00	Cr
	15	Due to SearchIt	3		955.00	106589.00	Cr
	25	Paid to Watt Energy	3	689.00		105900.00	Cr
	25	Due to Half's	5		4000.00	109900.00	Cr
	30	Elite Prod./SearchIt	3	1400.00		108500.00	Cr
	30	Paid to F & E Assoc.	3	55000.00		53500.00	Cr
	30	Accrue utilities exp	7		465.00	53965.00	Cr

ACCOUNT: INCOME TAXES PAYABLE **ACCOUNT NO.: 21002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	30	Inc tax due-FY 20X1	7		11415.00	11415.00	Cr

ACCOUNT: COST OF GOODS SOLD **ACCOUNT NO.: 51001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	2	Cost of sales	2	4800 00		4800 00	Dr
	12	Cost of sales	2	7900 00		12700 00	Dr
	16	Cost of sales	3	13395 00		26095 00	Dr
	20	Cost of sales	3	16150 00		42245 00	Dr
	25	Cost of sl-Pyramid	6	4000 00		46245 00	Dr
	30	**Adjust inventory**	**7**	**155 00**		**46400 00**	**Dr**

ACCOUNT: UTILITIES EXPENSE **ACCOUNT NO.: 53002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	10	Watt Energy-elec.	2	689 00		689 00	Dr
	30	**Accrue utilities exp**	**7**	**465 00**		**1154 00**	**Dr**

ACCOUNT: INSURANCE EXPENSE **ACCOUNT NO.: 55001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	**30**	**Insurance expense**	**7**	**2000 00**		**2000 00**	**Dr**

ACCOUNT: DEPRECIATION EXPENSE **ACCOUNT NO.: 56001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	**30**	**Depr-FYE June 20X1**	**7**	**2093 00**		**2093 00**	**Dr**

ACCOUNT: INCOME TAX EXPENSE **ACCOUNT NO.: 59002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	30	Income tax due	7	1 1 4 1 5 00		1 1 4 1 5 00	Dr

Accounting Cycle: Step 6 – Prepare an Adjusted Trial Balance

> **Note**: This is the **sixth** of the eight steps in the accounting cycle.

After the adjusting entries have been posted, the next step is to prepare an **adjusted trial balance**. The adjusted trial balance is prepared in the same way as the unadjusted trial balances were prepared, but it includes the adjusting entries.

The adjusted trial balance should be carefully reviewed. If corrections are needed to the accounting records, they should be made, and a corrected adjusted trial balance should be prepared. The new accounts and accounts with changed balances since the last, unadjusted, trial balance was prepared are in bold face.

Greenworks Distribution Company Trial Balance (Adjusted) June 30, 20X1			
Account Number	**Account Name**	**Debits**	**Credits**
11001	Cash	50,105.93	
11002	Cash Equivalents	100,410.96	
12001	Accounts Receivable	79,100.00	
14001	**Inventory**	**7,100.00**	
15001	**Prepaid Expense**	**22,000.00**	
17101	Land	75,000.00	
17201	Buildings	200,000.00	
17299	**Accumulated Depreciation-Buildings**		**427.00**
17301	Furniture & Equipment	135,000.00	
17399	**Accumulated Depreciation-Furn. & Equip.**		**1,666.00**
21001	**Accounts Payable**		**53,965.00**
21002	**Income Taxes Payable**		**11,415.00**
21003	Dividends Payable		0.00
21004	Deferred Revenue		0.00
22001	Long-term Debt		70,800.00
31001	Common Stock		50,000.00
31002	Additional Paid-in Capital		450,000.00
31003	Dividends	12,500.00	
32001	Retained Earnings		0.00
41001	Sales Revenue		121,150.00
49001	Interest Revenue		410.96
51001	**Cost of Goods Sold**	**46,400.00**	
51002	Shipping-out Expense	3,800.00	
52001	Salaries & Wages Expense	10,000.00	
53002	**Utilities Expense**	**1,154.00**	
54001	Advertising Media Expense	955.00	
54002	Advertising Production Expense	445.00	
55001	**Insurance Expense**	**2,000.00**	
56001	**Depreciation Expense**	**2,093.00**	
59001	Interest Expense	355.07	
59002	**Income Tax Expense**	**11,415.00**	
Totals		759,833.96	759,833.96

Accounting Cycle: Step 7 – Prepare Financial Statements

Note: This is the **seventh** of the eight steps in the accounting cycle.

Financial statements for the fiscal year ended June 30, 20X1 can be prepared from the adjusted trial balance.

A **full set of financial statements** presents the **elements** of financial statements. The elements of financial statements are assets, liabilities, equity, comprehensive income, investments by owners, and distributions to owners. The components of comprehensive income include revenues, expenses, gains, and losses during the period. The elements of financial statements are explained in more detail in Study Unit 14, *Types and Elements of Financial Statements.*

This example will include only a balance sheet and income statement. Greenworks has no other comprehensive income items, so the company's income statement is the same as its statement of comprehensive income. A statement of cash flows is not included here, but it is explained in Study Unit 15.

Greenworks Distribution Company
Balance Sheet
As of June 30, 20X1

Assets		
Current Assets		
Cash and cash equivalents	$ 150,516.89	
Accounts receivable	79,100.00	
Inventory	7,100.00	
Prepaid Expense	22,000.00	
Current assets		$ 258,716.89
Non-current Assets		
Land		$ 75,000.00
Buildings – net of depreciation		199,573.00
Furniture & equipment – net of depreciation		133,334.00
Non-current assets		$ 407,907.00
Total assets		$ 666,623.89
Liabilities & Equity		
Liabilities		
Current Liabilities		
Accounts payable	$ 53,965.00	
Income taxes payable	11,415.00	
Current portion of long-term debt[27]	14,400.00	
Current liabilities		$ 79,780.00
Non-current liabilities		
Long-term debt	$ 56,400.00	
Non-current liabilities		$ 56,400.00
Total Liabilities		$ 136,180.00
Equity		
Common stock	$ 50,000.00	
Additional paid-in capital	450,000.00	
Retained earnings	30,443.89	
Total Equity		$ 530,443.89
Total Liabilities & Equity		$ 666,623.89

Note: The retained earnings line on the balance sheet is what the balance in retained earnings will be after the year-end close. It includes net income of $42,943.89 less dividends declared of $12,500.00, for an ending balance of $30,443.89.

[27] Debt that matures in more than one year is long-term debt, and if it has a repayment schedule that requires regular principal payments, it is reported on the balance sheet in two places. The portion of the principal that is due to be repaid within the next 12 months is reported as current portion of long-term debt, a current liability, and the remainder of the principal is reported as long-term debt, a non-current liability. The total principal outstanding on the loan as of the balance sheet date is the sum of the two. Since a $1,200 principal payment plus interest is due each month on Greenworks' loan from Safety Bank, the current portion of the long-term debt is $1,200 × 12, or $14,400. The total principal outstanding is $70,800: the current portion of $14,400 plus the non-current portion of $56,400.

Greenworks Distribution Company
Income Statement
For the Partial Fiscal Year May 1- June 30, 20X1

Sales revenue	$ 121,150.00
Cost of goods sold	46,400.00
Gross profit	$ 74,750.00
Selling and administrative expenses:	
Shipping-out expense	$ 3,800.00
Salaries and wages	10,000.00
Utilities	1,154.00
Advertising	1,400.00
Insurance expense	2,000.00
Depreciation expense	2,093.00
Total selling and administrative expenses	$ 20,447.00
Operating income	$ 54,303.00
Interest revenue	410.96
Interest expense	355.07
Income before income taxes	$ 54,358.89
Income tax expense	11,415.00
Net income	$ 42,943.89

Study Unit 12: A.2. Performing the Year-End Close With Example

Accounting Cycle: Step 8 – The Year-End Close

Note: This is the eighth and final step of the eight steps in the accounting cycle.

After all the adjusting entries have been recorded, after the adjusted trial balance has been prepared, and after everything has been checked and double-checked for accuracy, it is time to close out the fiscal year in preparation for the next year's activity. **Closing** a temporary ledger account means resetting the account's balance to zero as of the closing date.

Note: If an automated accounting information system is in use, **be sure to back up the accounting information system before performing the year-end close.** If something goes wrong in the closing, the backup can be used to restore the system to its state before the close was attempted.

The ledger accounts that are closed are the **temporary accounts**, also called the **temporary equity accounts**, because their summarized information ultimately becomes a part of equity. The temporary accounts are closed by transferring their balances to the Retained Earnings account in equity.

Most of the temporary accounts are income statement accounts: revenue accounts, gain accounts, expense accounts, and loss accounts. Temporary accounts may also include a Dividends account, a contra-account in the equity section of the balance sheet, and the Income Summary account.

Note: When a cash dividend is declared by the Board of Directors, a contra-equity account called Dividends may be debited for the amount of the dividend while Dividends Payable, a liability account, is credited. If a Dividends account is used, it is a temporary account that is closed to Retained Earnings in the year-end close. If a Dividends account is not used, the amount of the dividend may be debited directly to Retained Earnings.

The Income Summary account is used only as an interim step and a control during the closing process when a manual accounting system is in use. It is not needed when an automated accounting information system is being used. The Income Summary account is not an asset, liability, equity, revenue, gain, expense, or loss account. It is an unclassified, temporary holding account in the Chart of Accounts.

The activities to be performed are:

1) Prepare and post the closing entries
2) Create a post-closing trial balance.

The Closing Process

The closing process may be a one- or two-step process, depending on whether dividends have been debited to a separate contra-equity account or directly to the Retained Earnings account when declared.

1) The first step is closing the income statement accounts to the Income Summary account to close them and then closing the Income Summary account to the Retained Earnings account.
   - The balance in the Income Summary account after the income statement accounts have been closed to it is checked against the net income (loss) on the income statement to make sure the two amounts are equal.28 A credit balance in Income Summary should be equal to net income; a debit balance in Income Summary should be equal to a net loss.
   - After making sure the balance in the Income Summary account is equal to the net income (loss), the Income Summary account is closed to the Retained Earnings account in Equity. If

[28] Dividends are not an expense of the company, so the Dividends account is closed separately to Retained Earnings without going through the Income Summary account.

the Income Summary account has a credit (debit) balance, Income Summary is debited (credited) and Retained Earnings is credited (debited).

2) If dividends have been debited to a separate Dividends account in equity, the second step is to close the Dividends account to the Retained Earnings account. The Dividends account is **credited** in the amount of its **debit** balance to reduce its balance to zero, and Retained Earnings is debited for the same amount.

Note: Permanent accounts—balance sheet accounts—are never closed.[29] Their balances keep increasing and decreasing from year to year. A permanent account's closing balance at the end of one year is the account's opening balance at the beginning of the following year.

Example: Closing Entries

Since Greenworks is using a manual accounting system, it first transfers the income statement temporary account balances to the Income Summary account. That is done in two steps.

- Income statement accounts with **credit** balances are closed and their balances reduced to zero by **debiting** them in the amount of their credit balances and crediting the Income Summary account for the same amount.
- Income statement accounts with **debit** balances are closed and their balances reduced to zero by **crediting** them in the amount of their debit balances and debiting the Income Summary account for the same amount.

The General Journal has been completed showing the income statement accounts with credit balances being debited and Income Summary being credited and the income statement accounts with debit balances being credited and Income Summary being debited.

The Income Summary account is not an asset, liability, equity, or income statement account. It is a temporary "holding" account to which the income statement accounts are first closed before their balances are moved to the Retained Earnings account. Thus, the Income Summary account is an intermediary account between the income statement and the Retained Earnings account that is used only during closing. Since it is used only in the closing process, the account's balance is zero during the accounting period and it does not appear on any trial balances or on any of the financial statements.

The Income Summary account is used only to provide a check on the balance reported for the net income or net loss on the income statement. Therefore, it is an internal control used in the closing process that is primarily used with manual accounting systems.

In Greenworks' Chart of Accounts, the account number for the Income Summary account is 99999.

The entries transferring income statement balances to the Income Summary account are journalized:

[29] If a separate Dividends account is used as a contra-equity account, that account is the exception because it is closed to Retained Earnings in the year-end close.

General Journal **Page 8**

Date		Account Titles and Explanations	A/C#	Debit	Credit
June	30	Sales Revenue	41001	121150.00	
		Interest Revenue	49001	410.96	
		Income Summary	99999		121560.96
		Close temporary income statement			
		accounts with credit balances to			
		Income Summary for fiscal YE close			
	30	Income Summary	99999	78617.07	
		Cost of Goods Sold	51001		46400.00
		Shipping-out Expense	51002		3800.00
		Salaries & Wages Expense	52001		10000.00
		Utilities Expense	53002		1154.00
		Advertising Media Expense	54001		955.00
		Advertising Production Expense	54002		445.00
		Insurance Expense	55001		2000.00
		Depreciation Expense	56001		2093.00
		Interest Expense	59001		355.07
		Income Tax Expense	59002		11415.00
		Close temporary income statement			
		accounts with debit balances to			
		Income Summary for fiscal YE close			

Next, the closing entries are posted to ledger accounts. To conserve space, only the accounts affected by the journalized closing entries are shown on the following pages. The closing transactions are in bold face.

ACCOUNT: SALES REVENUE **ACCOUNT NO.: 41001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	2	Sales on account	2		12600.00	12600.00	Cr
	12	Sales on account	2		20800.00	33400.00	Cr
	16	Sales on Account	3		35250.00	68650.00	Cr
	20	Sales on Account	3		42500.00	111150.00	Cr
	25	Sl on a/c-Pyramid	6		10000.00	121150.00	Cr
	30	**Close account**	**8**	**121150.00**		**0.00**	

ACCOUNT: INTEREST REVENUE **ACCOUNT NO.: 49001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	30	Int on MMDA	4		410.96	410.96	Cr
	30	Close account	8	410.96		0.00	

ACCOUNT: COST OF GOODS SOLD **ACCOUNT NO.: 51001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	2	Cost of sales	2	4800.00		4800.00	Dr
	12	Cost of sales	2	7900.00		12700.00	Dr
	16	Cost of sales	3	13395.00		26095.00	Dr
	20	Cost of sales	3	16150.00		42245.00	Dr
	25	Cost of sl-Pyramid	6	4000.00		46400.00	Dr
	30	Adjust inventory	7	155.00		46555.00	Dr
	30	Close account	8		46555.00	0.00	

ACCOUNT: SHIPPING-OUT EXPENSE **ACCOUNT NO.: 51002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	2	Shipping to cust.	2	565.00		565.00	Dr
	12	Shipping to cust.	3	690.00		1255.00	Dr
	16	Shipping to cust.	3	1035.00		2290.00	Dr
	20	Shipping to cust.	3	1410.00		3700.00	Dr
	25	Ship to Pyramid	6	100.00		3800.00	Dr
	30	Close account	8		3800.00	0.00	

ACCOUNT: SALARIES & WAGES EXPENSE **ACCOUNT NO.: 52001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
May	31	Sal/Wges-May 20X1	2	5000.00		5000.00	Dr
June	30	Sal/Wges-June 20X1	3	5000.00		10000.00	Dr
	30	Close account			10000.00	0.00	

ACCOUNT: UTILITIES EXPENSE **ACCOUNT NO.: 53002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	10	Watt Energy-elec.	2	689.00		689.00	Dr
	30	Accrue utilities exp	7	465.00		1154.00	Dr
	30	Close account	8		1154.00	0.00	

ACCOUNT: ADVERTISING MEDIA EXPENSE **ACCOUNT NO.: 54001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	15	SearchIt advert.	3	955.00		955.00	Dr
	30	Close account	8		955.00	0.00	

ACCOUNT: ADVERTISING PRODUCTION EXPENSE **ACCOUNT NO.: 54002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	15	Elite Productions	3	445.00		445.00	Dr
	30	Close account	8		445.00	0.00	

ACCOUNT: INSURANCE EXPENSE **ACCOUNT NO.: 55001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	30	Insurance expense	7	2 0 0 0 00		2 0 0 0 00	Dr
	30	Close account	8		2 0 0 0 00	0 00	

ACCOUNT: DEPRECIATION EXPENSE **ACCOUNT NO.: 56001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	30	Depr-FYE June 20X1	7	2 0 9 3 00		2 0 9 3 00	Dr
	30	Close account	8		2 0 9 3 00	0 00	

ACCOUNT: INTEREST EXPENSE **ACCOUNT NO.: 59001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	30	Int on term loan	4	3 5 5 07		3 5 5 07	Dr
	30	Close account	8		3 5 5 07	0 00	

ACCOUNT: INCOME TAX EXPENSE **ACCOUNT NO.: 59002**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	30	FY Income Tax	7	1 1 4 1 5 00		1 1 4 1 5 00	Dr
	30	Close account	8		1 1 4 1 5 00	0 00	

ACCOUNT: INCOME SUMMARY **ACCOUNT NO.: 99999**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	30	Close rev. a/cs	8		121,560.96	121,560.96	Cr
	30	Close exp. a/cs	8	78,617.07		42,943.89	Cr

Notice that the balances in the temporary income statement accounts are now zero. Those accounts are now ready to begin accumulating transactions for the next fiscal year.

Review Ending Balance in Income Summary Account

The ending balance in the Income Summary account is a credit balance of $42,943.89. That is equal to the net income reported on the income statement, so the next step is to close the Income Summary account's balance to the Retained Earnings account.

Close Income Summary Account to Retained Earnings Account

Because Greenworks operated profitably, the Income Summary account has a credit balance. Therefore, Income Summary is debited by the amount of its credit balance to reduce its balance to zero and Retained Earnings is credited to increase its balance by the same amount. If Greenworks had not operated profitably, the Income Summary account would have a debit balance and would need to be credited instead of debited to reduce its balance to zero; and Retained Earnings would have been debited to reduce its balance.

The Income Summary account is debited for $42,943.89 and the Retained Earnings account is credited for $42,943.89. The closing transaction is journalized in the General Journal as follows.

General Journal **Page 9**

Date		Account Titles and Explanations	A/C#	Debit	Credit
June	30	Income Summary	99999	42,943.89	
		Retained Earnings	32001		42,943.89
		Close Income Summary to Retained			
		Earnings			

The journalized transaction is posted to the appropriate ledger accounts. Again, only the accounts affected by the above transaction are shown. The added entries are in bold face. Note that the ending balance in the Income Summary account is zero.

ACCOUNT: RETAINED EARNINGS **ACCOUNT NO.: 32001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	30	Close Inc. Summary	9		42943.89	42943.89	Cr

ACCOUNT: INCOME SUMMARY **ACCOUNT NO.: 99999**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0.00	
June	30	Close rev. a/cs	8		121560.96	121560.96	Cr
	30	Close exp. a/cs	8	78617.07		42943.89	Cr
	30	Close Inc. Summary	9	42943.89		0.00	

Close Dividends Account to Retained Earnings

The final step is to close the Dividends account, a temporary contra-equity account, to the Retained Earnings account. The Dividends account has a debit balance of $12,500, so it will be credited for that amount and the Retained Earnings account will be debited for that amount. Thus, the Retained Earnings account will be reduced by the amount of the dividends declared during the fiscal year. The transaction is journalized as follows.

General Journal **Page 10**

Date		Account Titles and Explanations	A/C#	Debit	Credit
June	30	Retained Earnings	32001	12500.00	
		Dividends	31003		12500.00
		Close Dividends account to R/E			

The entries to close the Dividends account to Retained Earnings are posted as follows. The new entries are in bold face.

ACCOUNT: DIVIDENDS (CONTRA-EQUITY) **ACCOUNT NO.: 31003**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	15	Dividend declared	4	12500 00		12500 00	Dr
	30	**Close account**	**10**		**12500 00**	**0 00**	

ACCOUNT: RETAINED EARNINGS **ACCOUNT NO.: 32001**

Date		Description	Ref	Debit	Credit	Balance	Dr Cr
May	1	Beginning balance				0 00	
June	30	Close Inc. Summary	9		42943 89	42943 89	Cr
	30	**Close Dividends**	**10**	**12500 00**		**30443 89**	**Cr**

The $42,943.89 credit balance in the Retained Earnings account has been reduced by the $12,500.00 dividend, and the Retained Earnings account now has a credit balance of $30,443.89. That is the same as the retained earnings balance reported on the year-end balance sheet.

Post-Closing Trial Balance

The post-closing trial balance is as follows. Note that the temporary accounts—the income statement accounts, the Dividends account, and the Income Summary account—all have zero balances. The balances that have changed are in bold face.

Greenworks Distribution Company
Trial Balance (Post-Closing)
June 30, 20X1

Account Number	Account Name	Debits	Credits
11001	Cash	50,105.93	
11002	Cash Equivalents	100,410.96	
12001	Accounts Receivable	79,100.00	
14001	Inventory	7,100.00	
15001	Prepaid Expense	22,000.00	
17101	Land	75,000.00	
17201	Buildings	200,000.00	
17299	Accumulated Depreciation-Buildings		427.00
17301	Furniture & Equipment	135,000.00	
17399	Accumulated Depreciation-Furn. & Equip.		1,666.00
21001	Accounts Payable		53,965.00
21002	Income Taxes Payable		11,415.00
21003	Dividends Payable		0.00
21004	Deferred Revenue		0.00
22001	Long-term Debt		70,800.00
31001	Common Stock		50,000.00
31002	Additional Paid-in Capital		450,000.00
31003	**Dividends**	**0.00**	
32001	**Retained Earnings**		**30,443.89**
41001	**Sales Revenue**		**0.00**
49001	**Interest Revenue**		**0.00**
51001	**Cost of Goods Sold**	**0.00**	
51002	**Shipping-out Expense**	**0.00**	
52001	**Salaries & Wages Expense**	**0.00**	
53002	**Utilities Expense**	**0.00**	
54001	**Advertising Media Expense**	**0.00**	
54002	**Advertising Production Expense**	**0.00**	
55001	**Insurance Expense**	**0.00**	
56001	**Depreciation Expense**	**0.00**	
59001	**Interest Expense**	**0.00**	
59002	**Income Tax Expense**	**0.00**	
99999	**Income Summary**		**0.00**
Totals		668,716.89	668,716.89

Study Unit 13: A.2. Review of Accounting Cycle, Reversing Entries

Review of the Accounting Cycle

The accounting cycle consists of eight basic steps that are followed by bookkeepers and accountants to manage the books of an organization throughout a fiscal year.

1) **Identify** financial events and gather details about them. **Analyze** the events to determine how each will impact assets, liabilities, equity, revenues, gains, expenses, and losses.
2) **Record** transactions in the **General Journal**.
3) **Post** journalized transactions to **ledger accounts** and, if applicable, to sub-ledger accounts.
4) Prepare **unadjusted trial balance** to verify that total debits and total credits are equal. Repeat Steps 1-4 as necessary, preparing an unadjusted trial balance as necessary to assure the ledger remains in balance.
5) Make **adjusting entries** at the end of a fiscal year or interim period.
6) Prepare **adjusted trial balance.** Repeat as necessary whenever adjusting entries are posted.
7) Prepare **financial statements**. Repeat as necessary when interim or fiscal year-end financial statements are required.
8) At the end of the accounting period, prepare and post the **closing entries** and then prepare the **post-closing trial balance** to verify that all temporary accounts have been reset to zero balances and that total debits and total credits are equal.

Reversing Entries at the Beginning of the Following Period

Whenever revenues, gains, expenses, or losses need to be accrued at the end of an accounting period so they will be recognized in the correct accounting period, consideration must be given to whether an adjustment will be required during the following accounting period to prevent the amounts accrued from being duplicated in the next accounting period. This consideration is not a part of the eight-step accounting cycle because it occurs during the following accounting period, but it is an important final step.

For some, though not all, accruals, a regular transaction will be processed during the next accounting period, for example to record a sales invoice issued or a payables invoice received after some or all of the invoiced amount has already been accrued during the previous accounting period in order to recognize it in the correct accounting period. That can cause a problem, because the amount accrued during the previous accounting period could get entered twice in the accounting system—once through the adjusting entry and again when the item is routinely processed in the subsequent accounting period.

To prevent that from happening, **reversing entries** are generally posted as of the first day of the following accounting period for accruals that require them.

For example, on June 30, Greenworks accrued electricity expense estimated at $465 that would be due to Watt Electric for the period from June 10 through June 30, 20X1, even though the monthly electricity bill had not been received or even generated by Watt Electric as of that date. When the monthly bill is received in July 20X1, it will be for the period from June 10 through July 9, and thus it will include the $465 of utilities expense that was estimated and accrued as a June 20X1 expense. If the full amount of the bill is recorded as a July expense, the $465 that was previously accrued in June will be duplicated.

The duplication can be prevented with **reversing entries**. The $465 accrued on June 30 is reversed in its entirety on July 1 by crediting Utilities Expense and debiting Accounts Payable for $465. Then, when the electricity bill is received during July, it can be recorded in the normal way. The total amount of the bill—let's use $750 for this example—will be debited to Utilities Expense and credited to Accounts Payable in the usual way as a July transaction.

The difference between the reversed accrual ($465 credited to Utilities Expense on July 1) and the full amount of the electric bill ($750 debited to Utilities Expense on July 9) will be recognized correctly as a $285 expense for July 20X1, representing utilities expense incurred from July 1 through July 9, the end of the billing period.

To reverse the accrual on July 1, 20X1, the following transaction is posted:

Dr Accounts Payable 465.00
Cr Utilities Expense 465.00

The Watt Energy bill for $750 for the period June 10 through July 9, 20X1 is received during July. It is recorded as follows:

Dr Utilities Expense 750.00
Cr Accounts Payable 750.00

The expense recognized for the period from July 1 through July 9 will be $285: the $750 debit minus the $465 credit, both entries having been posted to the Utilities Expense account during July. The amount payable to Watt Energy in Accounts Payable will be $750, as credited to the Accounts Payable account in the second transaction above. When payment is made, Accounts Payable is debited for $750 and Cash is credited for $750.

Dr Accounts Payable 750.00
Cr Cash 750.00

Not all accruals should be reversed at the beginning of the next accounting period. The only accruals that should be reversed are those for which regular processing of an invoice or other source document duplicating the amount accrued will take place during the next accounting period. For those accruals that do require reversing entries, the attention of an accountant is necessary to see that the needed reversing entries are posted at the beginning of the next period to prevent duplication in the accounting system and to make sure the correct amount is paid in the subsequent period.

If an automated accounting information system is being used, it may give the bookkeeper or accountant an opportunity to schedule the needed reversing entries for the next accounting period at the same time as an accrual needing reversal is posted.

Study Unit 14: A.3. Types and Elements of Financial Statements

Users of Financial Information

Users of financial information include existing and potential investors, lenders, and other creditors; and the decisions they are making relate to buying, selling, or holding debt or equity instruments and providing credit. Users need information to help them assess their expectations about returns—such as dividends, principal payments, interest payments, or market price increases—and the amount, timing, and uncertainty of (that is, prospects for) future net cash inflows to the entity.[30]

In addition to making decisions about investing and lending, financial statements are used to assess areas of strength and weakness in the company, evaluate management performance, and determine whether the company is complying with regulatory requirements, among other things. Therefore, other users who may not be providing capital to the firm—such as management, employees, financial analysts, and regulators—may find financial statements useful as well.

It is not possible for accounting information to provide all the information that all users need to make their decisions. Users need to access information from other sources as well, such as economic forecasts, the political climate, and industry outlooks.[31] However, the financial statements do attempt to provide as much useful information as possible.

Users of financial information can be classified according to whether they are direct or indirect users and whether they are internal or external users.

Direct and Indirect Users. Direct users are directly affected by the results of a company. Direct users include investors and potential investors, employees, management, suppliers, and creditors. Direct users stand to lose money if the company has financial problems.

Indirect users are people or groups who represent direct users. They include financial analysts and advisors, stock markets, and regulatory bodies.

Internal and External Users. Internal users such as managers make decisions from within the firm regarding the operation of the company. External users such as investors, lenders, financial analysts, and regulators make decisions from outside of the firm about whether or not to begin a relationship, continue a relationship, or change their relationship with the firm.

Note: Financial reports are prepared for users who have a **reasonable knowledge** of business and economic activities and who review and analyze the information diligently. That means that, in the preparation of financial statements, a **reasonable level** of competence on the part of users can be assumed. Someone who has a "reasonable understanding" of business, accounting, and economic activities should be able to read the financial information and understand it. However, at times, even well-informed and diligent users may need the assistance of an adviser to understand information about complex economic phenomena.[32]

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[30] FASB Statement of Financial Accounting Concepts No. 8, *Conceptual Framework for Financial Reporting-Chapter 1, The Objective of General Purpose Financial Reporting* (Amended December 2021), paragraphs OB2-OB3, pp. 1-2.

[31] Ibid., paragraph OB6, p. 2.

[32] *Qualitative Characteristics of Useful Financial Information*, paragraph QC32, p. 6.

Elements of Financial Statements

Elements of financial statements are the building blocks of the financial statements. The "elements" are six broad classifications that constitute the complete set of fundamental elements of financial statements for business entities. Elements of financial statements are **assets**, **liabilities**, **equity** (or for a not-for-profit entity, net assets), **comprehensive income and its components**, **investments** by owners, and **distributions** to owners.

Comprehensive income is determined by changes in assets and liabilities other than those resulting from investments by owners and distributions to owners. The components of comprehensive income include **revenues**, **expenses**, **gains**, and **losses**.

The Financial Statements

The financial statements used by business entities under U.S. Generally Accepted Accounting Principles (GAAP) are:

1) Balance sheet (also called the statement of financial position)
2) Statement of comprehensive income/Income statement
3) Statement of changes in stockholders' equity
4) Statement of cash flows

1) The Balance Sheet (Statement of Financial Position)

Note: Guidance in the *Accounting Standards Codification*® on presentation of the balance sheet is in ASC 210.

The balance sheet, also called a **statement of financial position**, provides information about an entity's assets, liabilities, and owners' equity **at a point in time** (usually the end of a reporting period). The balance sheet shows the entity's resource structure—the major classes and amounts of its assets—and its financing structure—the major classes and amounts of its liabilities and equity. The balance sheet provides a basis for computing rates of return[33], evaluating the capital structure of the business, and predicting a company's future cash flows. It helps users to assess the company's liquidity, financial flexibility, net resources available and capability of generating future net cash flows, exposures to risk, and ability to meet its long-term financial obligations.[34]

- **Liquidity** refers to the time expected to elapse until an asset is converted into cash or until a liability needs to be paid. The greater a company's liquidity is, the lower will be its risk of failure.
- **Financial flexibility** is the ability of a business to take actions to alter the amounts and timing of its cash flows that enable the business to respond to unexpected needs and take advantage of opportunities.
- **Net resources and capability of generating future net cash flows** refers to the company's net resources available to generate cash flows, a concern to users who may be resource providers because it affects their ability to receive cash flows from the company as returns.[35]
- **Risk** refers to the unpredictability of future events, transactions and circumstances that can affect the company's cash flows and financial results.

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[33] A rate of return is an income amount divided by an asset amount. Thus, though the balance sheet does not present income information, it provides a **basis for computing rates of return** because it presents the asset amounts that are used in the computation of the rate of return.

[34] *Presentation*, paragraph PR23, p. 5.

[35] Ibid., paragraph PR28, p. 6.

- **Ability to meet its long-term financial obligations** when due refers to solvency A company with a high level of long-term debt relative to its assets has lower solvency than a company with a lower level of long-term debt. An assessment of solvency is important to investors, lenders, and other creditors; and the objective of general purpose financial reporting is to provide information that is useful to them for making decisions.[36]

Thus, the statement of financial position can be used to assess a company's ability to pay its debts when due and to distribute cash to its investors to provide them an adequate rate of return.

A balance sheet is not intended to show the value of a business. However, along with other financial statements and other information, a balance sheet should provide information that will be useful to someone who wants to make his or her own estimate of the business's value.[37]

Balance sheet accounts are **permanent accounts**. Balance sheet accounts are not closed out at the end of each accounting period as income statement accounts are, but rather their balances are cumulative. They keep accumulating transactions and changing with each transaction, year after year.

Elements of the Balance Sheet

Elements of the balance sheet include assets, liabilities, and stockholders' (or owners') equity.

An **asset** is a present right to an economic benefit, or "what is owned."

- "**Present right**" means that the asset exists at the financial statement date, and therefore the right and the asset (for example, cash, a receivable, or a fixed asset) have arisen from past transactions or other past events.
- An "**economic benefit**" is the capacity to provide services or benefits to the entities that use them. For a business, an economic benefit eventually results in potential net cash inflows. Cash is valuable because of what it can buy. The purchasing power of cash is the basis of its economic benefit.[38]

A **liability** is a present obligation to transfer an economic benefit. Like a present right to an economic benefit, a present obligation to transfer an economic benefit exists at the financial statement date. It may be an obligation to pay cash or to provide a good or service.[39]

Equity represents the entity's net assets, or the residual (remaining) interest in the assets of the entity after deducting its liabilities from its assets. For a business entity, equity is the **ownership interest**.[40]

Valuation of Balance Sheet Elements

Balance sheet elements are valued on various bases:

- **Historical cost or historical proceeds**: Property, plant, and equipment and most inventories are reported at the amount paid to acquire them, adjusted after acquisition for amortization or other allocations. Liabilities such as those involving the obligation to provide goods or services to customers are reported at historical proceeds, or the amount received when the obligation was incurred, adjusted for amortization or other allocations.
- **Current cost**: Some inventories are reported at their current replacement cost.
- **Current market value**: Certain investments in marketable securities are reported at their current market value. Current market value is also used for assets expected to be sold at prices that are

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[36] *The Objective of General Purpose Financial Reporting*, paragraph BC1.34, p. 17.

[37] *Presentation*, paragraph PR24, pp. 5-6.

[38] FASB Statement of Financial Accounting Concepts No. 8, *Conceptual Framework for Financial Reporting-Chapter 4, Elements of Financial Statements* (December 2021), paragraphs E16, E19, E21, E28, pp. 5, 8.

[39] Ibid., paragraphs E37, E40, pp. 9, 10.

[40] Ibid., paragraph E61, p. 14.

lower than previous carrying amounts. Some liabilities such as for writers of options or short sellers of common shares are reported at current market value.

- **Net realizable or settlement value**: Short-term receivables and some inventories are reported at their net realizable values, the undiscounted amount that an asset is expected to be converted into less direct costs necessary to make the conversion. Trade payables are reported at their net settlement value, that is, the amount expected to be paid to liquidate the obligation including direct costs necessary to make the payment.
- **Present (discounted) value of future cash flows**: Long-term receivables are reported at the present value of future cash inflows into which an asset is expected to be converted less present values of cash outflows necessary to obtain the inflows. Long-term payables are the present value (discounted at the implicit or historical rate) of future cash outflows expected to be required to satisfy the liability.[41]
- **Cost less expired or used portion**: Prepaid expenses expire due to their use over time. They are valued on the balance sheet at their prepaid cost less the expired portion.

When an entity is no longer a going concern and liquidation[42] is imminent, its assets (but not its liabilities) should be reported at their liquidation values.

Current and Non-Current Classification of Assets and Liabilities

On the balance sheet, assets and liabilities are classified as either **current** or **non-current**. Generally, current assets and liabilities are short-term and non-current assets and liabilities are long-term, but the more correct terminology is "current" and "non-current" for both assets and liabilities. Whether an asset or liability is classified as current or non-current depends on the time frame in which the entity expects an asset to be converted into cash or a liability to be settled.

Current Assets

Current assets are cash and other assets or resources that are reasonably expected to be realized in cash or sold or consumed within the longer of one year, or the company's operating cycle if the operating cycle is longer than one year. The **operating cycle** is the average time between the acquisition of materials or services and when the company has collected the cash from the sale of the inventory or services. For most businesses, the operating cycle is measured in weeks or months. But, for some industries, lumber or ship-building, for example, the operating cycle may be measured in years.

Because of this definition, it is possible for a company to have an asset classified as a current asset even if the asset will not be converted to cash for more than a year. This happens when the company's operating cycle is longer than 12 months.

Current assets are perhaps the easiest of the various sections of the balance sheet to identify. The most common examples include:

- Cash
- Cash equivalents, which are short-term, highly liquid investments that are convertible to known amounts of cash without a significant loss in value and have maturities of 3 months or less from the date of purchase

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[41] FASB Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises* (Amended December 2021), paragraph 67, pp. 3-4.

[42] When a business is liquidated, its assets are sold for whatever they can bring and the proceeds are used to pay off as much of the company's liabilities as possible. Liquidation value is usually significantly below the book value of the assets, because potential buyers of the assets know that the company must liquidate as quickly as possible and will accept lower prices for its assets.

- Marketable securities classified as current assets
- Accounts receivable
- Short-term notes receivable
- Inventory
- Prepaid expense

Non-Current Assets

Non-current assets are assets or resources **other than** those that are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

Common examples of non-current assets include:

- Property, plant, and equipment (fixed assets)
- Intangible long-term assets (examples – copyrights, patents and goodwill)
- Long-term investments

Current Liabilities

Current liabilities are obligations that will be settled through the use of current assets or by the creation of other current liabilities.

Examples of current liabilities include:

- Accounts payable and trade notes payable due to suppliers for purchase of goods and services
- Cash dividends payable
- Current portions of long-term debt and lease liabilities (the portions of the principal due within the operating cycle, usually twelve months)
- Taxes payable, wages payable, and other accruals (payables)

Non-current Liabilities

Non-current liabilities are liabilities that will **not** be settled within one year or the operating cycle if the operating cycle is longer than one year.

Examples of non-current liabilities are:

- Long-term notes or bonds payable.
- The long-term portions of long-term debt and lease liabilities (the portions of the principal due after the operating cycle (usually twelve months)
- Pension obligations

Equity

Equity is the remaining balance of assets after the subtraction of all liabilities. Equity is the portion of the company's assets owned by and owed to the owners. If the company were to be liquidated, equity represents the amount that would theoretically be distributable to the owners.

All business enterprises have owners' equity, but the types of accounts in owners' equity will differ depending on the type of the entity. The following discussion focuses on corporations, so the elements of owners' equity discussed here are the elements of a corporation's equity.

Owners' equity for corporations is split into six different categories:

- **Capital stock**. The par or stated value of the shares issued.
- **Additional paid-in capital**. The excess of amounts contributed by owners from the sale of shares over and above the par or stated value of the shares issued.
- **Retained earnings**. Net income of the company that has not been distributed as dividends.
- **Accumulated other comprehensive income items**. Specific items that are not included in the income statement but are included in equity and adjust the balance of equity, even though they do not flow to equity by means of the income statement as retained earnings do.
- **Non-controlling interest**. A portion of the equity of subsidiaries that the reporting entity owns but does not own wholly.
- **Treasury stock**. Treasury stock is shares of the company that that have been issued and sold and later repurchased by the company. Treasury stock is a contra-equity account that reduces equity on the balance sheet.

Limitations of the Balance Sheet

- Many assets are not reported on the balance sheet, such as human resources, internally generated intangible assets, and competitive advantages.
- Values of certain assets such as property, plant, and equipment are measured at historical cost, not the asset's market value, replacement cost, or value in use.
- Judgments and estimates are used to determine the values of many items reported on the balance sheet, such as estimates of the balance of receivables the company will be able to collect, the use of expected useful life of fixed assets to determine the amount of depreciation, and estimates of liability for future warranty claims.
- Most liabilities are valued at the present value of cash flows discounted at the rate that was current when the liability was incurred, not at the current market interest rate.

2) The Income Statement

Guidance in the *Accounting Standards Codification®* on presentation of the income statement is in ASC 225.

Note: The income statement constitutes the largest part of comprehensive income. Comprehensive income comprises everything on the income statement plus certain revenues, expenses, gains, and losses that are excluded from net income and reported instead as increases and decreases to an equity account on the balance sheet, Accumulated Other Comprehensive Income. Comprehensive income is explained and discussed in detail in Study Unit 22, "Revenue Recognition and Income Measurement."

The income statement reports the results of a company's operations during a given period of time. The income statement provides users with information to help them predict the amounts, timing, and uncertainty of (or prospects for) future cash flows.

The income statement is created using the accrual method of accounting as applied to historical transactions. The income statement gives the results of operations for a **period of time** and is like a movie, recording the monetary effect of business transactions for that period of time. The income statement is different from the balance sheet because the balance sheet provides information specific to **one moment in time, like a photograph**.

The accounts used to record revenues, expenses, gains, and losses are **temporary accounts.** They are **closed to retained earnings**, **a permanent account on the balance sheet** at the end of each fiscal year. At the beginning of each fiscal year, the balances in the income statement accounts are zero.

Certain types of events are classified and reported separately on the income statement. A basic **multiple-step** income statement format includes the following sections:

Sales revenues	$XXXXX
Cost of goods sold	XXXX
Gross profit	$XXXXX
Selling, general, and administrative expenses	XXX
Operating income	$XXXXX
Interest and dividend income	XXX
Interest expense	XXX
Non-operating gains/(losses)	XXXX
Income before income taxes	$XXXXX
Provision for income taxes	XXXX
Net income	$ XXXX

The **gross profit** line on an income statement is calculated as **sales revenue less the cost of goods sold**. Cost of goods sold is the cost of the inventory that was sold during the period. Gross profit as an amount and gross profit as a percentage of sales revenue are frequently used to analyze the profitability of items sold. The gross profit from sales needs to be adequate to cover the other expenses of the business, such as selling, general, and administrative expenses. If gross profit as a percentage of sales revenue falls during a period from its level in previous periods, it could mean the cost of inventory has increased without a commensurate increase in selling prices; or it could mean inventory theft is taking place.

Operating income on the income statement is **gross profit less selling, general, and administrative expenses.** Operating income adjusted for non-operating items such as interest and dividend income, interest expense, and non-operating gains and losses equals **income before income taxes**.

Income before income taxes adjusted for income taxes equals **net income**.

A **single-step** income statement that has only two groupings, revenues and expenses, may also be used. Total expenses are subtracted from total revenues to determine the net income or loss. The single-step form of income statement is simpler and eliminates potential classification problems. However, it is less useful for analysis purposes because it does not clearly show the amount of gross profit.

Elements of the Income Statement

The income statement is made up of four elements: revenues, gains, expenses, and losses.

- **Revenues** represent increases to assets or the reduction of liabilities (or a combination of both) that result from delivering or producing goods, rendering services, or other activities.[43] For a non-profit organization, contributions received are revenues.[44]

> **Note**: The **revenue recognition principle** requires revenues to be recognized in the accounting period in which the performance obligation is satisfied.

- **Gains** are increases in equity resulting from transactions other than those that result from revenues or investments by owners. Gains generally result from exchange transactions and holding gains.[45]

- **Expenses** are outflows or other using-up of assets or the incurrence of liabilities that result from delivering or producing goods, providing services, and other activities.[46]

> **Note**: The **expense recognition principle**, or the **matching principle**, states that recognition of expenses is related to net changes in assets and the earning of revenues. Expenses should be recognized when the work or product contributes to revenue.

- **Losses** are decreases in equity that result from transactions and other events other than those that result from expenses or distributions to owners. Losses generally result from exchange transactions, holding losses, and events such as natural catastrophes.

The difference between revenues and gains and between expenses and losses depends on what the company's typical activities are. For example, the sale of a product as part of a company's normal operations constitutes revenue. However, the sale of a fixed asset is not part of the company's regular operations, so the excess of the amount received for the asset over its net book value is a gain, not revenue.

Limitations of the Income Statement

Net income necessarily involves estimates that affect the company's performance for the period.

- Net income is an estimate that reflects a number of assumptions such as an estimate of the receivables that will be collected.
- Income is affected by the accounting methods used, such as the cost flow assumption used in calculating cost of goods sold.
- Income measurement requires judgment, such as the useful life of fixed assets, which determines depreciation expense recognized.
- Items that cannot be measured reliably are not on the income statement. For instance, increased value due to brand recognition, customer service, and product quality are not part of net income.

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[43] *Elements of Financial Statements*, paragraph E80, p. 19.

[44] Ibid., paragraph E84, p. 19.

[45] Ibid., paragraph E82, E84, p. 19.

[46] Ibid., paragraph E81, p. 19.

3) Statement of Changes in Stockholders' Equity

The statement of changes in stockholders' equity reports the changes in each account in the stockholders' equity section of the balance sheet and in total stockholders' equity during the year and reconciles the beginning balance in each account with the ending balance. Since stockholders' equity accounts are permanent accounts that keep on accumulating their balances from year to year, information about the sources of changes in the separate accounts is required to make the financial statements sufficiently informative.

The statement of changes in stockholders' equity is prepared in columnar form, with a column for each individual account and a column for total stockholders' equity. The first line contains the beginning balances; the sources of the changes are on lines below and identified in the leftmost column; and the final line contains the ending balances in each account. A statement of changes in stockholders' equity should be prepared for every year that comparative financial statements are presented. One statement can be prepared for all the years to be presented, showing beginning balances, activity, and ending balances for each year. The ending balance for each year becomes the beginning balance for the subsequent year.

Following is an example of a statement of changes in stockholders' equity.

Statement of Changes in Stockholders' Equity

	Preferred Stock	Common Stock	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Total
Balance, December 31, 20X1	100	1,650	5,310	3,540	0	10,600
Net income				3,689		3,689
Preferred dividends declared				(5)		(5)
Common dividends declared				(1,023)		(1,023)
Issuance of common stock		20	260			280
Other comprehensive income					325	325
Balance, December 31, 20X2	100	1,670	5,570	6,201	325	13,866
Net income				2,125		2,125
Preferred dividends declared				(5)		(5)
Common dividends declared				(528)		(528)
Issuance of common stock		15	210			225
Other comprehensive income					149	149
Balance, December 31, 20X3	100	1,685	5,780	7,793	474	15,832

4) The Statement of Cash Flows (SCF)

Guidance in the *Accounting Standards Codification*® on preparation of the Statement of Cash Flows is in ASC 230.

The statement of cash flows is one of the three main financial statements presented by companies (the other two are the balance sheet and income statement).

The statement of cash flows is covered in detail in the next Study Unit, Study Unit 15.

Notes to Financial Statements

Note: Guidance in the *Accounting Standards Codification®* on presentation of notes to financial statements is in ASC 235.

For an item to be recognized in the main body of an entity's financial statements, it must meet the definition of a basic element, be measurable with sufficient certainty, and be relevant and reliable, per SFAC 5.[47] Items that do not meet those four criteria but are nevertheless essential to a user's understanding of items presented within the main body of the financial statements are presented in the notes to financial statements. Notes are used to supplement and explain the information presented in the main body of the financial statements.[48]

Notes to financial statements are **not** considered to be part of a full set of financial statements.[49] A "full set of financial statements" presents the elements of financial statements (assets, liabilities, equity/net assets, comprehensive income, investments by owners, and distributions to owners), as well as cash flows during the period.

Notes and supplemental information are a required part of **general purpose financial reporting**, however. "General purpose financial reporting" is defined as a full set of financial statements **plus** the notes to financial statements and other required supplemental information.[50]

General purpose financial reporting requires notes to financial statements to present a thorough picture of a company's financial position and the results of its operations. The notes are used to explain the items presented in the main body of the financial statements and the methods used to determine the amounts reported. For example, if a company recognized a loss in the income statement due to a fire, a note is a way to explain the cause of the loss. The notes can also provide further breakdown and analysis of certain accounts that are deemed important, such as an analysis of depreciation recorded for the period. Disclosures in the notes can provide additional relevant information that can be important to fully understanding the financial statements.

The first note is a **summary of significant accounting policies**, such as what method of depreciation is being used or how inventories are valued and what cost flow assumption is being used. Accounting policies are the principles a company uses and considers appropriate to present fairly its financial statements. Disclosure of accounting policies is used to identify and describe the principles of accounting being followed by the reporting entity and the methods used for applying the principles that materially affect the determination of the company's financial position, cash flows, or results of operations.

Accounting policy disclosures that are commonly required, as follows:

- The basis of consolidation used,
- Depreciation method(s) used,
- Information on amortization of intangibles,
- Inventory pricing,
- Recognition of revenue from contracts with customers, and
- Recognition of revenue from leasing operations.

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47 *Recognition and Measurement in Financial Statements of Business Enterprises*, p. vii.

48 FASB Statement of Financial Accounting Concepts No. 8, *Conceptual Framework for Financial Reporting-Chapter 8, Notes to Financial Statements* (December 2021), paragraph D4, p. 2.

49 *Presentation*, Appendix A: Basis for Conclusions, paragraph BC7.10, p. 16.

50 Ibid., paragraphs PR18, PR20, pp. 4-5.

The summary of significant accounting policies can suggest to the user whether the company is using liberal or conservative accounting policies. Liberal accounting policies are policies that lead to higher current income, such as longer-then-usual estimated lives for depreciable assets. Conservative accounting policies lead to lower current income, for example the use of the LIFO inventory cost flow assumption when prices are rising.

Limitations of Financial Statements in General

All financial statements have some limitations that prevent them from providing the users with exactly the information that they want and need. These limitations include:

- Measurements are made in terms of money, so qualitative aspects of a firm are not included. Only transactions recorded in the accounting records are in the financial statements.
- Information supplied by financial reporting involves estimation, classification, summarization, judgment, and allocation.
- Financial statements primarily reflect transactions that have already occurred; consequently, many aspects of them are based on historical cost.
- Only transactions involving the entity being reported on are reflected in that entity's financial reports. However, transactions of other entities, such as competitors, may be very important.
- Financial statements are based on the going-concern assumption, which is an assumption that the entity will continue in operational existence for the foreseeable future. If the going-concern assumption is invalid and the business is facing liquidation, the appropriate attribute for measuring financial statement items is liquidation value. If a business will be liquidated, it is not appropriate to use historical cost, fair value, net realizable value, or any other valuation measure for a going-concern's financial statements.

Note: The term "fair value" will be used in various contexts throughout these study materials. "Fair value" is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. If an asset or liability has an active market, then the quoted price in the market is its fair value at any given time. If the item does not have an active market, then other information can be used to determine its fair value, as defined by the Financial Accounting Standards Board (FASB) in the accounting standards.

The Relationship Among the Financial Statements

Financial statements articulate[51] with each other, reflecting different aspects of the same transactions or other events and circumstances. For example:

- The amount of change in retained earnings on the balance sheet during the period is equal to net income on the income statement minus dividends paid.
- Many balance sheet accounts are used to calculate income statement amounts. For example, fixed assets are used to calculate depreciation expense.
- The change in cash on the balance sheet from the beginning of the period to the end of the period is equal to the net increase (decrease) in cash during the period reported on the statement of cash flows.

No one financial statement provides all the financial information that is useful for making an assessment or a decision. Resource providers need a variety of information, including information about assets, liabilities, and equity at the end of a period; comprehensive income during the period, including revenues, expenses, gains and losses; cash flows during the period, and investments by and distributions to owners. A full set of financial statements is intended to present that information.[52]

Note: A **full set of financial statements** presents the **elements** of financial statements. The elements of financial statements are assets, liabilities, equity, comprehensive income including revenues, expenses, gains, and losses during the period, cash flows during the period, and investments by and distributions to owners.[53]

General purpose financial reporting includes a full set of financial statements plus the notes to financial statements and required supplemental information.[54] The notes amplify or complement information about items in financial statements.[55] The **notes** to financial statements are not considered a part of a full set of financial statements, but notes and supplementary information are a required part of **general purpose financial reporting**.[56]

[51] In this usage of the word "articulate," it means "to be interrelated."

[52] *Presentation*, paragraphs PR14, PR20, pp. 4-5.

[53] Ibid., paragraphs PR18, PR20, pp. 4-5.

[54] Ibid., paragraph PR20, p. 5.

[55] *Elements of Financial Statements*, paragraph E6, p. 2.

[56] *Presentation*, paragraph PR20, p. 5. The statement that the notes are not a part of a full set of financial statements is a departure from earlier guidance, which stated that notes have "long been viewed as an integral part of financial statements prepared in accordance with generally accepted accounting principles." That statement has been replaced with the statement that notes and supplementary information are a required part of general purpose financial **reporting**.

Study Unit 15: A.4. Statement of Cash Flows

The Statement of Cash Flows (SCF)

Guidance in the *Accounting Standards Codification*® on preparation of the Statement of Cash Flows is in ASC 230.

The statement of cash flows is one of the three main financial statements presented by companies (the other two are the balance sheet and income statement). The statement of cash flows must be presented by **all businesses**, for-profit and non-profit, public and private, whenever the company presents either a balance sheet and income statement or just an income statement. Thus, if a company presents income statements only and no balance sheets for prior periods, it must also present the statement of cash flows for each of the prior periods.

The primary purpose of the statement of cash flows is to provide information regarding cash receipts and cash payments made by an entity during a period. "Cash" includes cash on hand, demand deposit accounts, and other kinds of accounts that the company may make deposits to and may make withdrawals from at any time without prior notice or penalty. It includes **cash**, **cash equivalents**, **restricted cash**, **and restricted cash equivalents**. All charges and credits to those accounts are cash receipts or payments for purposes of the statement of cash flows.[57]

Note: The term "cash" is used in the context of the statement of cash flows to refer to the **total** of cash, cash equivalents, restricted cash, and restricted cash equivalents. The four classifications are combined for purposes of reporting activities on the statement of cash flows.

When used with information in the other financial statements and related disclosures, the statement of cash flows helps investors, creditors, and others to assess factors such as:

- The entity's ability to generate positive future net cash flows
- The entity's ability to meet its obligations and pay dividends and its needs for external financing
- Reasons for differences between net income and associated cash flows
- The effects on the entity's financial position of its cash and noncash investing and financing activities during the period.[58]

Classification Within the Statement of Cash Flows

The statement of cash flows presents all the receipts and payments of cash of the company during the period. For the purposes of presentation and usefulness, the cash activities are broken down into **three categories of activities** in the statement of cash flows. These three categories are:

1) Operating activities
2) Investing activities
3) Financing activities

Limitations of the Statement of Cash Flows

- The statement of cash flows shows only how much cash was received and paid out for operating, investing, and financing activities.
- A positive operating cash flow may have been achieved by not paying the payables when due, an important thing for users to know. For users to recognize the existence of past due payables, they need to use the balance sheet and income statement.

[57] Per ASC 230-10-45-4.

[58] Per ASC 230-10-10-1 and 10-2.

Preparation of the Statement of Cash Flows

Overview of the Preparation of the Statement of Cash Flows

One of the good things about the SCF is that the net cash flow from all three sources combined—operating activities, investing activities, and financing activities—is known before the statement is prepared. The total of the net cash flows from operating, investing, and financing activities must be equal to the amount of change in the balance of cash from the beginning of the period to the end of the period. Because the cash balances for the prior period and the current period are on the balance sheets, the total increase or decrease in cash for the period can be easily calculated.

Format of the Statement of Cash Flows

The format for a statement of cash flows is as follows (in this specific order):

Name of Company
Statement of Cash Flows
For the Year Ended XXXX XX, 20XX

Cash flows from operating activities		
......	$XXXX	
......	XXXX	
......	XXXX	
Net cash provided by operating activities		$XXXXX
Cash flows from investing activities		
......	$XXXX	
......	XXXX	
Net cash provided by investing activities		$XXXXX
Cash flows from financing activities		
......	$XXXX	
......	XXXX	
Net cash provided by financing activities		$XXXXX
Net increase in cash, cash equivalents, and restricted cash		$ XXXX
Cash, cash equivalents, and restricted cash at beginning of year		$XXXXX
Cash, cash equivalents, and restricted cash at end of year		$XXXXX

Supplemental schedule of **noncash investing and financing** activities:

- XXXXX
- XXXXX

Note: When the indirect method is used to prepare the cash flows from operating activities section of the Statement of Cash Flows, a supplemental schedule showing the amount of cash paid for interest and the amount of cash paid for income taxes must also be disclosed.

Classification of Items Within the Statement of Cash Flows

The SCF presents all the company's **receipts of cash and uses of cash** during the period. For the purposes of presentation and usefulness, the cash activities are broken down into **three main categories of activities**:

1) Operating activities
2) Investing activities
3) Financing activities

The sum of the cash flows from the three categories above must equal the net increase or decrease in cash during the period. The net increase or decrease in cash is also reported in the SCF.

A discussion of what cash flows are included each of the three categories of activities follows.

Note: Candidates should **know** the specific items listed under each of the three categories: operating activities, investing activities, and financing activities.

Cash Flows from Operating Activities

Cash flows from operating activities are cash inflows and cash outflows that generally involve producing and delivering goods and providing services. In general, any item not classified as investing or financing activities is an operating activity.

Transactions that cause gains or losses are generally **not** considered operating activities. Gains and losses arise from events that do not involve the main business operations of the company. There are a few exceptions to this rule, but they are outside the scope of the exam.

The following items are the main items classified as operating activities according to the FASB's *Accounting Standards Codification*®, Topic 230, "Statement of Cash Flows":

- Cash received from customers from sales of goods or services
- Cash receipts—interest and dividends—from returns on loans, other debt instruments, and equity securities
- Cash paid to suppliers to acquire materials for manufacture or goods for sale, including principal payments on accounts and notes payable to suppliers for the materials and goods.
- Cash payments to other suppliers and employees.
- Cash paid to governments for taxes and other fees.
- Cash interest paid.

Cash Flows from Investing Activities

Investing activities are activities the company undertakes to generate a future profit from investments. Investing activities including making and collecting loans and acquiring and disposing of debt or equity instruments and property, plant, and equipment and other productive assets (other than items that are part of inventory). Common events that are classified as investing activities in the *Accounting Standards Codification*® (ASC 230-10-45-11 through 45-13) are:

- The purchase and sale of property, plant, and equipment (fixed assets).
- The making and collecting of loans made by the entity.
- The purchase and sale of most equity and debt investments. (Note: a few specific types of investment are classified as operating activities, but that detail is outside the scope of the exam.)

Cash Flows from Financing Activities

Financing activities are activities a company undertakes to raise capital to finance the business and the repayment of the same. Common events that are financing activities according to the *Accounting Standards Codification®* include:

- Proceeds from issuance of stock.
- The borrowing and repayment of money through bank loans, issuing bonds, mortgages, notes, and other short or long-term borrowing.
- Payments of cash dividends or other distributions to owners. Note that dividends **paid** are a financing activity, but dividends **received** are an operating activity.
- Payments to reacquire the entity's equity instruments (**treasury stock purchases**). Treasury stock is shares that have been issued and then later repurchased by the issuer.

Net Cash Provided by Operating Activities: Two Methods

Cash flows from operating activities may be calculated and presented in either of two ways: the direct method and the indirect method.

- The **direct method** essentially adjusts each line of the income statement to make it a cash number instead of an accrual number. For example, revenue is adjusted to become cash received.
- The **indirect method** begins with net income and adjusts the net income figure to remove any income or expense items that are investing or financing activities and to present the cash flows from operations instead of the accrual-basis net income.

The direct method and the indirect method are both acceptable under U.S. GAAP for preparing the net cash flows from operating activities section of the statement of cash flows, but a company must consistently use the same method each period.

Note: The direct and indirect methods differ **only in their presentations of cash flows from operating activities**. Despite the difference in presentations, the end total of net cash flows from operating activities will be exactly the same under both methods. The difference between the two methods relates only to the presentation of the information, not to the results.

Note: The ICMA's Learning Outcome Statements for the MFAA exam states that candidates need to be able to demonstrate an understanding of how a statement of cash flows is prepared using the indirect method of determining cash flow from operating activities. Therefore, preparation of the operating activities section under the indirect method only will be covered in detail. Preparation of the operating activities section under the direct method will be described briefly, however, so that candidates can understand how it differs from the indirect method.

Operating Activities, the Direct Method

The direct method shows separately each operating activity that caused cash to be spent or received, such as cash paid to suppliers or cash collected from customers. The direct method presentation is very similar to the income statement in the lines in the presentation. Three sets of adjustments need to be made to the income statement line items.

1) Each line on the income statement that represents an operating activity is adjusted to reflect the cash flows of that item, instead of the accrual accounting amount. For example, revenue is adjusted to be cash received from customers and cost of goods sold is adjusted to be cash paid to suppliers.

> **Example**: Sales revenue for the year 20X5 was $1,500,000. Beginning accounts receivable (at year-end 20X4) on the balance sheet was $100,000. Ending accounts receivable (at year-end 20X5) was $125,000.
>
> Cash received from customers during 20X5 was $1,500,000 + $100,000 − $125,000 = $1,475,000.
>
> The beginning A/R balance is added to the sales revenue for the period because it is assumed that the amount outstanding in A/R at the beginning of the current period (from sales made during the previous period) was collected during the current period. The ending A/R balance is subtracted because that represents sales made during the current period for which the amount receivable was **not** collected during the current period.

2) Some income statement items are noncash revenues or expenses, and noncash items are eliminated. Depreciation expense is an example of a noncash income statement item. Even though depreciation expense is reported on the income statement, the expense does not represent cash that was paid out during the current period.

3) Some lines on the income statement represent transactions for activities other than operating activities. For example, the gain or loss on the sale of fixed assets is related to an investing activity but it is included in net income. The cash received from the sale, which includes any gain or loss on the sale, will be shown on the statement of cash flows as part of cash provided by investing activities. Therefore, gains and losses recognized in net income must be excluded from net cash provided by operating activities so that they are not included twice on the statement of cash flows.

The actual process for preparing the statement of cash flows using the direct method to develop the net cash flows from operating activities section is outside the scope of the CMA exam and so is not presented here.

Operating Activities, the Indirect Method

The FMAA exam requires candidates to be able to understand the preparation of a statement of cash flows using the indirect method for cash flows from operating activities.

Under the indirect method of preparing the cash flows from operating activities section of the statement of cash flows, all adjustments are made to the **net income** figure from the income statement. The adjustments for the indirect method are the same as those for the direct method, with adjustments for changes in balance sheet accounts and the elimination of noncash and non-operating activity transactions. However, the adjustments are made to the figure on the net income line instead of to the figures on the various individual lines on the income statement.

Begin with **net income** as the top line of the operating activities section of the SCF and then adjust net income by reversing noncash and non-operating items that are included in net income.

Net income is adjusted for four types of items, as follows:

1) **Eliminate noncash income and expense items** such as depreciation expense that are included in the income statement. Add items that reduced net income and deduct items that increased net income.

2) **Eliminate investing and financing activity events** whose results are included in the income statement, for example gains and losses on the income statement.

3) Include the effect of any operating activities that were not included in net income but that did have a cash effect. Exclude (eliminate) the effect of any events that are included in net income but that did not have a cash effect. Examples of these adjustments are those that must be made for changes in the balances of receivables, payables, inventory, and other assets and liabilities.

1) Eliminate Noncash Income Statement Items

Perhaps the most obvious example of the required adjustments, and one of the easiest, is the elimination of **depreciation and amortization that has been expensed**. Net income will have been reduced by depreciation and amortization expense, but the company did not pay out any cash related to those expenses. Therefore, the amount of depreciation and amortization expense charged against net income will need to be **added back** to net income to determine the net cash from operating activities.

Any other noncash items on the income statement must be eliminated as well. Another type of non-cash adjustment to net income that needs to be reversed is **unrealized** (holding) gains and losses on securities that have been recognized in net income. Unrealized gains and losses on securities arise because of changes in the fair value of securities that are held, and unrealized gains and losses on those securities are charged to net income in the period in which they occur. However, the unrealized gains and losses do not represent any cash activity since the securities have not been sold, and therefore the unrealized gains and losses need to be backed out. Unrealized gains that increase net income should be deducted from net income and unrealized losses that decrease net income should be added back to net income.

2) Eliminate Investing and Financing Activity Events Included in the Income Statement

The income statement reports the results of all income-generating and expense-generating transactions the company entered into during the period. However, some of those events are not operating activities. In calculating cash flows from operating activities using the indirect method, eliminate all the items in the income statement that do not relate to operating activities. The events that need to be eliminated as non-operating activities are usually identified on the income statement as gains and losses. Gains and losses arise from secondary business activities and are therefore not operating activities.

The most common realized gains and losses on the income statement that are eliminated in determining cash flow from operating activities are:

- Realized gains or losses from the sale of equipment or other fixed assets
- Realized gains or losses on the sale of securities

Note: **Unrealized** investment holding gains and losses reported on the income statement also need to be eliminated from net income, as referenced in item 1) above. Since they are noncash transactions, though, they are not investing or financing activities.

To eliminate realized gains and losses on the income statement from cash flows from operating activities in the preparation of cash flows from operating activities using the indirect method, **gains are subtracted** from net income and **losses are added back** to net income.

Each investing or financing activity event that gave rise to a realized gain or loss must be included in the SCF in either the investing or financing activities section. However, each event will be included at the **cash amount** of the transaction, not at the amount of the gain or loss from the transaction.

3) Individual Account Adjustments

After taking out the noncash items and investing and financing activity items, the company next needs to adjust net income for changes in individual asset and liability accounts that are related to operating activities. The following adjustments are all made to net income.

Net Accounts Receivable

An adjustment needs to be made to net income for the change in the net accounts receivable[59] balance over the period.

If **net accounts receivable increases** during the period, it means that customers bought a greater value of goods that they have not yet paid for than customers who bought goods in the previous period and paid for them in the current period. Therefore, the increase in net accounts receivable means that cash collections during the period were lower than the revenue recognized during the period. The amount of the increase in net accounts receivable will need to be **subtracted from net income** because not all the cash corresponding to the amount of revenue recognized during the period was received during the period.

On the other hand, if the **net accounts receivable balance decreases** during the period, it means that the company collected more cash from the previous period's sales (for example, sales made in December of last year) than it failed to collect from the current period's sales (for example, sales made this December). The decrease in net accounts receivable over the period will therefore need to be **added to net income** to properly calculate the cash received from operating activities during the period.

> **Note**: When the operating activities section is being prepared according to the indirect method, always use the amount of change in **net accounts receivable**, not the amount of change in gross accounts receivable.

> **Note**: Any other receivable account that affected net income will need a similar adjustment made for it.

Inventory

An increase in inventory during the period indicates that the company has paid cash for inventory items that have not yet been expensed as cost of goods sold. Therefore, the **amount of increase in the inventory account needs to be subtracted from net income**.

Similarly, a **decrease in the inventory account needs to be added to net income**.

> **Note**: Just because the inventory account has increased, that does not mean cash was paid for the purchased inventory. However, if the company did not yet pay for some of the purchased inventory, the company will have an increase in payables that will also be an adjustment in calculating net cash flows from operating activities, as covered in the next topic.

Accounts Payable

As with accounts receivable, an adjustment will also need to be made to reflect the change in the accounts payable balance during the period.

Accounts payable are related to the "cost of goods sold" line on the income statement because cost of goods sold on the income statement is calculated using, among other things, the amount of inventory purchased during the year. If the company purchased inventory but did not pay for it during the year, its accounts payable balance will be higher at the end of the year. The company has recognized an increase in an asset account (inventory), which is considered a decrease in cash, but the company has not yet actually paid for some of it. Similarly, if the company has made other purchases that are period costs such as selling, general

[59] Net accounts receivable is gross accounts receivable less the balance in the allowance for credit losses on receivables account, since the allowance for credit losses account is a valuation account that decreases the balance in accounts receivable to a level the company thinks is collectible.

and administrative items that it has not yet paid for but has recognized as expenses, the income statement will include expenses that have not yet actually been paid for.

Therefore, any **increase in accounts payable must be added back to net income** because it represents increases in assets and expenses for which the cash has not yet been paid.

On the other hand, a decrease in accounts payable means that the company paid for items this year that it purchased during the previous year and thus were expensed during the previous year. To create the equivalent of a cash basis net income, the amount of the **decrease in accounts payable will need to be subtracted from net income**.

Example: If a company started in business on December 30 and its only activity during the year was to buy $100 of inventory on credit, the cash flows for the year would be $0. Also, the company's net income would be $0. Additionally, the company's inventory account will have increased by $100 and accounts payable will have increased by $100.

Based on the needed adjustments above, a deduction of $100 would need to be made from net income because of the increase in inventory. An addition of $100 would also need to be made to net income because of the increase in accounts payable. These two adjustments net to $0, which would be the net cash from operating activities for the company.

Note: Any other payable (for example, salaries payable) or other liability account that affected net income will need a similar adjustment made for it.

General Rules for Operating Activity Asset and Liability Accounts

The following rules should be used to adjust net income by the amount of change in operating activity asset and liability accounts when calculating net cash flows from operating activities using the indirect method

Operating Asset Accounts

- The amount of an **increase** in an asset account should be **deducted** from net income.
- The amount of a **decrease** in an asset account should be **added** to net income.

Operating Liability Accounts

- The amount of an **increase** in a liability account should be **added** to net income.
- The amount of a **decrease** in a liability account should be **deducted** from net income.

The rule is that **assets** adjust net income to cash flow in the **opposite direction** from the direction of change in the account balance. **Liabilities** adjust net income to cash flow in the **same direction** as the account balance changes.

Summary: The Indirect Method

Below is a summary of the steps to prepare the operating activities section under the indirect method. They are presented to show how all the items discussed above fit together.

1) **Add all depreciation and amortization expense** back to net income.
2) **Add all non-operating losses** on the income statement back to net income.
3) **Subtract all non-operating gains** on the income statement from net income.
4) **Add and subtract the changes in balance sheet accounts that are related to operating activities:** net accounts receivable, accounts payable, inventory, other payables and receivables, bond discount or premium amortization, and other assets and liabilities.

The Two Methods Compared and Contrasted

Both the direct method and the indirect method of preparing the operating activities section of the SCF produce the same result for net cash provided by operating activities because the same adjustments are made under both methods to the amounts on the income statement. The difference is that under the direct method **each individual line** on the income statement is adjusted and each individual type of operating cash flow is presented, whereas under the indirect method the **net income figure** is adjusted and only the net operating cash flow is presented.

Investing and Financing Activities

Cash Flows from Investing Activities

The cash inflows and outflows from investing activities are those related to the items included in investing activities.

Exam Tip: Exam questions on the statement of cash flows often center on the sale of fixed assets. Usually, some of the information needed to answer the question will be provided as "Other Additional Information."

The main issue in calculating net cash provided by investing activities will probably be the purchase or sale of property, plant, or equipment. Remember that the amount reported in the investing activities section of the statement of cash flows is **the amount of cash** received or paid.

- For an asset purchase, the amount paid for the asset is reported in the SCF.
- For the sale of an asset, the amount of cash received for the asset is reported in the SCF.

Information regarding the gain or loss on the sale of the asset is **not** the amount that is used in calculating cash flows from investing activities, nor is the book value of the asset sold used, although the book value of the asset and the gain or loss on the sale are used to **calculate** the amount of cash received from the sale. However, neither the book value nor the gain or loss are used individually, and they should not be included in the statement of cash flows.

Note: Any gain or loss on the sale of fixed assets included in net income needs to be eliminated from net income when calculating net cash flows from operating activities using the indirect method.

An exam question may not directly give the amount received for the sale of an asset. Instead, the amount received may need to be calculated using the book value and gain or loss on the sale.

Example: Knox Co. sold a fixed asset that had an original cost of $20,000 and accumulated depreciation of $12,000 at the time of the sale. Knox realized a gain of $5,000 on the sale.

Although the amount of cash received on the sale is not provided, it can be calculated from the information that is provided, as follows.

At the time of the sale, the asset had a net book value of $8,000: $20,000 cost less $12,000 accumulated depreciation. Since the asset was sold at a $5,000 gain, Knox must have received $5,000 more than the book value of $8,000, or $13,000, for the sale. The $13,000 cash received from the sale of the equipment is presented on the statement of cash flows as a cash inflow from investing activities.

In addition, the $5,000 gain will be an adjustment to net income in calculating net cash flows from operating activities when the statement of cash flows is prepared using the indirect method, which begins with net income. The gain is included in net income, but it is not an operating cash flow. Therefore, the $5,000 gain must be **deducted** from net income when calculating net cash flow from operating activities because it is included instead in investing activities in the $13,000 cash received from the sale of the fixed asset.

Cash Flows from Financing Activities

Cash flows from financing activities are calculated in the same manner as those for investing activities. Again, **only the amount of cash in the transaction is used**. For example, only the amount of cash paid to redeem an outstanding bond issue before its maturity date, including any premium paid due to the early redemption, is reported in the SCF, not the book value of the bond on the date of the redemption nor the gain or loss on the early extinguishment of the debt. However, as was the case with investing activities, the information on the book value and the gain or loss may be needed to calculate the amount of cash actually paid to redeem the bond.

Note: In reporting investing and financing activities, **do not net together cash paid and cash received** amounts, even when they are for the same classification of items. For example, the statement of cash flows should have separate lines for "Cash paid to purchase equipment" and "Cash received from the sale of equipment."

Statement of Cash Flows Disclosures

Noncash Investing and Financing Activities

Note: Noncash investing and financing activities are reported in a schedule below the SCF. While it is not really a fourth category of cash activities, think of it as a fourth category of the SCF. Do not forget about these noncash transactions if a problem requires the preparation of a complete SCF.

Some investing and financing activities are not included on the face of the statement of cash flows (meaning within the statement itself) because they are **noncash** investing or financing transactions. Examples of noncash investing and financing transactions are:

- Debt converted to equity.
- Borrowing money to purchase a fixed asset when the lender pays the loan proceeds directly to the seller of the asset to make sure the loan proceeds are used as intended, or when the seller provides the financing.
- Obtaining a right-of-use asset in exchange for a lease liability.
- Buying or selling fixed assets for something other than cash (for example, stock).
- Obtaining a building or other item by gift.
- Exchanging noncash assets or liabilities for other noncash assets or liabilities.

Even though no cash is involved in these transactions, they need to be disclosed in the statement of cash flows **if they affect recognized assets or liabilities.**

Disclosure of noncash investing or financing activities is required because these events may be very important for a potential investor to know about. For example, if the company makes a practice of issuing new shares to acquire fixed assets, the disclosure of that fact will let the potential investor know that his or her ownership share will be diluted as the company buys fixed assets.

Noncash investing or financing activities may be presented as either a narrative or summarized in a schedule.

Study Unit 16: A.4. Internal Controls

Internal Control Definition

According to the COSO publication, *Internal Control – Integrated Framework,*[60]

> Internal control is a process, effected by[61] an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance.

Thus, internal control is a process that is carried out (effected) by an entity's board of directors, management, and other personnel that is designed to provide **reasonable assurance** that the company's objectives relating to **operations**, **reporting**, and **compliance** will be achieved.

1) **Operations** objectives relate to the **effectiveness and efficiency of operations**, or the extent to which the company's basic business objectives are being achieved and its resources are being used effectively and efficiently. Operations objectives include operational and financial performance goals and safeguarding of assets against loss. A company's operations objectives will vary depending on the choices that management makes about structure and performance. As part of the objective-setting process, management should specify its risk tolerance. For operations objectives, risk tolerance might be expressed as an acceptable level of variance related to the objective.

2) **Reporting** objectives pertain to **internal and external financial and non-financial reporting**. Reporting objectives include reliability, timeliness, transparency, or other requirements as set forth by regulators, recognized standard setters, or the entity's policies. External reporting objectives are driven by rules, regulations, and standards as established by regulators and standard-setters external to the organization. Internal reporting objectives are driven by the entity's strategic direction and by reporting requirements established by management and the board of directors.

3) **Compliance** objectives relate to the organization's **compliance with applicable laws and regulations**, encompassing all laws and regulations to which the company is subject. These laws and regulations establish minimum standards of behavior and may include marketing, packaging, pricing, taxes, environmental protection, employee safety and welfare, and international trade as well as many others. For a publicly held corporation or any corporation that reports to the SEC, compliance objectives also include the SEC's reporting requirements. A company's record of compliance or noncompliance with laws and regulations affects its reputation in its communities and its risk of being the recipient of disciplinary procedures.

Note: The three categories of company objectives with which internal control is concerned—operations, reporting, and compliance—are very important to know.

Operations, reporting, and compliance address different needs, and they may be the direct responsibilities of different managers. But every internal control should be directed toward the achievement of objectives in at least one and possibly more than one of the three categories.

The three categories of objectives are distinct, but they do overlap. Therefore, a specific control objective for a specific company could fall under more than one category. For example, the reporting objective of ensuring reliable external financial reporting in accordance with accounting standards also concerns the compliance objective of adhering to accounting standards as established by standard-setters and, for

[60] *Internal Control – Integrated Framework*, copyright 1992, 1994 and 2013 by the Committee of Sponsoring Organizations of the Treadway Commission. Used by permission. The Committee of Sponsoring Organizations of the Treadway Commission includes the following five organizations: American Institute of Certified Public Accountants (AICPA), American Accounting Association (AAA), Institute of Internal Auditors (IIA), Institute of Management Accountants (IMA), and Financial Executives International (FEI).

[61] To "effect" something means to cause it to happen, put it into effect, or to accomplish it. Thus, "effected by" means "put into effect by" or "carried out by."

publicly held corporations, complying with the SEC's reporting requirements in accordance with that body's regulations.

Fundamental Concepts

The definition of internal control reflects several fundamental concepts, as follows:

1) The purpose of internal control is to help the company **achieve its objectives**. The focus is on achieving objectives. The objectives that internal control applies to fall into the three categories above: **operations**, **reporting**, and **compliance**.

2) Internal control is an ongoing **process**. It is not something that can be done once and be completed. It is a journey, not a destination. It consists of ongoing tasks and activities. It is a means to an end, not an end in itself.

3) Internal control is accomplished by **people**. It is something that must be put into effect by people—it is not policies and procedures. People are located throughout the organization at every level, from the members of the board of directors to the staff. Simply writing policy manuals that call for internal control procedures is not enough. To be effective, people must put the policies and procedures into effect.

4) Internal control procedures can provide **reasonable assurance** only—**not absolute assurance and not a guarantee**—to the entity's board of directors and senior management that the company's objectives will be achieved in the three named areas. This statement reflects the fundamental concepts that (1) the cost of an internal control system should not exceed the expected benefits, and (2) the overall impact of a control procedure should not hinder operating efficiency.

5) Internal control must be **flexible** to be adaptable to the entity's structure. Internal control needs to be adaptable to apply to an entire entity or just to a particular subsidiary, division, operating unit, or business process.

Internal Control Risk

Internal control risk is the risk that the design or operation of an entity's internal control system will not prevent or detect a threat to the company's achievement of its objectives relating to operations, reporting, an compliance. Internal control risk exists even in the best control system because an internal control system cannot provide a **guarantee** that an organization will achieve its objectives. No matter how well designed and operated it is, internal control can provide only **reasonable assurance** to management and the board of directors that the organization's objectives will be achieved. Controls may fail because of human error, they may be circumvented by collusion, management may override internal control procedures, or the internal controls may become out of date due to a lack of ongoing monitoring by management. Additionally, some controls may not be implemented because the cost of the control is greater than the expected benefits from the control.

Managing internal control risk involves designing, implementing, and maintaining a system of internal controls that can provide reasonable assurance that the organization's objectives in the areas of operations, reporting, and compliance will be achieved. Maintaining the system requires that management evaluate the controls regularly and update them to respond to changes in the business and in its systems and procedures.

Segregation of Duties

Segregation of duties is the process of assigning various steps in a process to different people so no one person has so much control over a process that they are able to both perpetrate and conceal theft or other fraudulent activities. Having multiple people working on a process also minimizes the chance of errors going unrecognized.

Note: Usually segregation of duties requires **different people to perform** the following **four functions** of related activities:

1) **Authorizing** a transaction.
2) **Recordkeeping**: **Recording** the transaction, preparing source documents[62], maintaining journals.
3) Keeping **physical custody**[63] of the related asset: For example, receiving checks in the mail.
4) The **periodic reconciliation** of the physical assets to the recorded amounts for those assets.

In a question about an effective or ineffective internal control, keep in mind that the above four things must be done by different people.

The periodic reconciliation in the segregation of duties is an important independent check that should take place. In the reconciliation that is referred to here (#4), the company is making certain that the records of how much of something the company **should have** matches the amount that they **actually have**. The recordkeeping duty (#2) keeps track of how much of something the company should have, and the physical custody duty (#3) has that actual asset. These two amounts should be the same and the periodic reconciliation is that independent check.

For example, the person who keeps the records of the inventory records how much inventory was purchased and how much inventory was transferred into production. This is the record of how many units of inventory the company thinks that they have. The person who is keeping this record gets all of the documents about inventory purchased and received and transferred out of inventory to production. They do not actually see or count the inventory as they are doing all of this based on the records connected to inventory.

The person who has physical custody of the inventory is in charge of the warehouse where the inventory is stored. The actually receive the inventory when it is purchased and move it to the production line when it is needed. This person knows how many of units the company actually has on hand.

The person who does the periodic reconciliation is performing the independent check to compare how much inventory the company thinks that they should have (#2) and actually have (#3).

If the same person did both duties #2 and #2, that person would be able to steal some inventory when it was received and then falsify both the records of how much inventory the company should have and the physical count.

The segregation of duties is important in every aspect of the business. You do not need to know the detail of the duties that should be separated, but following are some examples of why the segregation of duties is important.

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[62] A source document is the original document containing the details of a business transaction. It includes key information about the transaction, such as the transaction date, the name of the party (for example, the customer or vendor), the amount received or paid if cash was involved, and the substance of the transaction. Source documents such as invoices or checks are usually identified with a unique number so they can be differentiated in the accounting system. The use of pre-numbered source documents is useful as a control, since it enables the company to know if any documents are missing. Furthermore, source documents are used by auditors as evidence that recorded transactions represent actual events that occurred.

[63] In the context of internal control, custody involves keeping, guarding, caring for, watching over, inspecting, preserving, and maintaining the security of an item that is within the immediate personal care and control of the person to whose custody it is entrusted.

Examples of Segregation of Duties

Inventory Purchases and Control

Authorization: The **Purchasing Manager** approves purchase orders after receiving an authorized purchase requisition request.

Record keeping: **Receiving Department personnel** record items received and prepare receiving report.

Custody: **Warehouse personnel** control physical access to inventory.

Reconciliation: **Inventory Control personnel** perform physical inventory counts. **Accounting Department personnel #1** reconciles physical inventory counts to inventory on hand records. **Accounting Department personnel #2** adjusts inventory on hand records to the physical inventory count and **Accounting Department personnel #3** prepares the journal entry to adjust inventory in the general ledger to the inventory on hand records.

Note: In the above there are three different Accounting Department Personnel involved.

Credit Sales

Authorization: The **Sales Manager** approves sales, the **Credit Manager** approves credit and credit terms, and the **Accounts Receivable Manager** approves invoices, write-offs of delinquent accounts, and sales returns for credit.

Record keeping: **Billing Department personnel** invoice customers and **Accounts Receivable personnel** record receivables and record write-offs of delinquent accounts after approval by the Accounts Receivable Manager.

Custody: **Warehouse personnel** have custody of inventory until sold. Inventory is released to the Shipping department for shipment upon receipt of authorization in the form of a packing slip and evidence that an invoice has been prepared (or evidence of payment already received).

Reconciliation: **Accounting Department personnel** reconcile the accounts receivable journal to accounts receivable according to the general ledger.

Cash Collections

Authorization: The **Accounts Receivable manager** approves transactions to record customer payments in customer accounts.

Record keeping: **Accounts Receivable personnel** record customer payments in customer accounts.

Custody: **The Cashier**, a member of the Treasurer's Office, receives cash payments from customers. **Two Cashiers' Department employees** should receive the customer payments, create a listing of receipts, and prepare the bank deposit.

Reconciliation: **Accounting Department personnel** reconcile cash according to the general ledger to the bank statement.

Following are a few examples of potential internal control failures that can result from inadequate segregation of duties:

1) If the person who has custody of cash received also has the authority to authorize receivable write-offs, that person could receive a cash remittance on account from a customer, authorize a fraudulent write-off of the customer's (paid) receivable, and divert the cash collected to his or her own use.

2) If the person who controls the physical access to inventory also performs physical inventory counts, that person could remove an item from inventory for his or her own use but report the item as present in the physical inventory.

3) If the person who approves purchase orders for fixed assets also records the receipt of fixed assets and performs physical fixed asset inventories, that person could purchase office furniture, record its receipt so it would be paid for, remove it to another location, sell it, and pocket the proceeds from the sale while continuing to report the furniture as being present.

4) If the person who prepares the bank deposit also reconciles the checking account, that person could divert cash receipts and cover up the activity by creating "reconciling items" in the account reconciliation report.

Be aware, however, that segregation of duties does not guarantee that fraud will not occur. Two or more employees could collude with one another (work together to conspire) to commit fraud, covering for one another and, presumably, sharing the proceeds.

Software tools are available to assist a business in identifying incompatible functions and assessing risks and conflicts.

Note: **Collusion** occurs when two or more individuals work together to overcome the internal control system and perpetrate a fraud. When two or more people work together, they can get around any segregation of duties that may have been established.

Safeguarding Assets

Physical safeguarding of assets against loss is an important part of a company's operations objectives. Loss to assets can occur through unauthorized acquisition, use, or disposition of assets or through destruction caused by natural disasters or fire. Safeguarding takes place through both physical controls and software controls.

Physical controls. Equipment, inventories, securities, cash, and other assets are secured physically in locked or guarded areas with physical access restricted to authorized personnel and are periodically counted and compared with amounts in control records.

Software controls. All data and programs that the company uses must be protected from unauthorized access and unauthorized use. The most common way to do this is through passwords and other user authentication procedures required to access the computer system and programs with in. Password access should be controlled by limiting the access granted by each employee's password to just the information needed by that employee to do his or her job. Employees should be instructed not to leave their passwords in exposed areas (for example, taped to the computer).

Types of Common Physical Security Controls

Physical security includes both physical access control and security of the equipment and premises. The goal of these controls is to reduce or eliminate the risk of losing organizational assets and the risk of harm to employees. Controls should be identified, selected, and implemented based on a thorough risk analysis. Some common examples of general physical security controls include walls and fences, locked gates and doors, manned guard posts, monitored security cameras, guard dogs, alarm systems, and smoke detectors and fire suppression systems.

Physical access to servers and networking equipment should be limited to authorized persons. There are a number of different tools available that help to restrict access.

Keys are the least expensive way to manage access but also the weakest because keys can be copied.

A more effective method is **card access**, where a magnetically encoded card is inserted into or placed near a reader. The card access also provides an audit trail that records the date, time, and identity of the person who entered. One significant limitation of card access, however, is that a lost or stolen card can be used by anyone until it is deactivated.

Biometric access systems can be used when physical security needs to be rigorous. Biometric access systems use physical characteristics such as blood vessel patterns on the retina, handprints, or voice authentication to authorize access. In general, there is a low error rate with such systems. That said, no single system is completely error-free, so biometric access systems are usually combined with other controls.

Controls can also be designed to **limit activities that are performed remotely**. For example, changes to employee pay rates can be restricted to computers physically located in the payroll department. Thus, even if online thieves managed to steal a payroll password, they would be prevented from changing pay rates because they would not have access to the premises.

Software Controls – User Authentication and Authorization Controls

Companies need to have strict controls over access to their proprietary data. Poor data oversight can leave a company vulnerable to accidents, fraud, and malicious parties who manipulate equipment and assets. **Logical security** focuses on **who can use which computer equipment** and **who can access data**. **Logical access controls** identify authorized users and control the actions that they can perform.

To restrict data access only to authorized users, one or more of the following strategies can be adopted: Something you **know**, or something you **are**, or something you **have,**

Something You Know

User IDs and passwords are the most common "something you know" way of authenticating users. Security software can be used to encrypt passwords, require changing passwords after a certain period of time, and require passwords to conform to a certain structure (e.g., minimal length, no dictionary words, restrict the use of symbols). Procedures should be established for issuing, suspending, and closing user accounts; in addition, access rights should be reviewed periodically.

Something You Are

Biometrics is the most common form of "something you are" authentication. Biometrics can recognize physical characteristics such as the iris or retina of the eyes, fingerprints, vein patterns, faces, or voices.

Biometric scanners can be expensive and are generally used only when a high level of security is required.

Something You Have

Some very high-security systems require the presence of a physical object to certify an authorized user's identity. The most common example of this "something you have" authentication is a fob, a tiny electronic device that generates a unique code to permit access; for increased security, the code changes at regular

intervals. A lost fob may be inconvenient but not a significant problem because the fob by itself is useless. Furthermore, a stolen fob can be remotely deactivated.

Two-Factor Authentication

Two-factor authentication requires two independent, simultaneous actions before access to a system is granted. The following are examples of two-factor authentication:

- In addition to a password, some systems require entering additional information known only to the authorized user, such as a mother's maiden name or a social security number. However, this security feature can be undermined if the secondary information can be obtained easily by an unauthorized third party.
- Passwords can be linked to biometrics.
- In addition to a password, a verification code is emailed or sent via text message that must be entered within a few minutes to complete the login.
- A biometric scan and a code from a fob are combined to allow access.

Other User Access Considerations

Besides user authentication, there are other security controls related to user access and authentication to prevent abuse or fraud:

- **Automatic locking or logoff policies**. Any login that is inactive for a specific period of time can automatically be logged out. As a result, there will only be a narrow window of time for someone to take advantage of an unattended system.
- Logs of all login attempts, whether successful or not. Automatic logging of all login attempts can detect activities designed to gain access to an account by repeatedly guessing passwords. Accounts under attack could be proactively locked in order to prevent unauthorized access.
- Accounts that automatically **expire**. If a user needs access to a system only for a short period of time, the account should be set to automatically expire at the end of that period, which prevents open-ended access.

What Internal Control Can and Cannot Do

As a conclusion to internal controls, it is important that we remember what can be expected of internal control and what internal control cannot do.

Internal controls **can**:

1) Help an organization get to where it wants to go, avoiding pitfalls and surprises along the way.
2) Help an organization achieve its performance and profitability goals and prevent loss of resources.
3) Help ensure reliable financial reporting.
4) Help ensure that the organization complies with laws and regulations.

However, internal controls **cannot provide a guarantee** for the company. Internal control has limitations including simple human error or faulty judgments; and controls can be circumvented through collusion and well-planned fraud. Because of this, **internal control can provide only *reasonable assurance* to management and the board of directors regarding achievement of the entity's objectives.**

Furthermore, internal controls must be evaluated in terms of their **cost-benefit relationship**. The cost of the operations of the controls should be less than the benefit that is derived from them. This will lead to some controls not being implemented and a company accepting some amount of risk simply because the cost of the necessary controls (in time, money, or both) are greater than the amount of the potential loss.

Study Unit 17: A.5. Managing a Company's Daily Finances

It is critical for a company to have enough cash available to make payments as those payments come due. If the company does not have the cash it needs to meet payroll and pay other expenses when due, it risks needing to liquidate long-term assets to pay short-term obligations or at worst, bankruptcy. The process of managing cash and paying liabilities as they come due is called working capital management.

Net working capital is the difference between current assets and current liabilities. A company's net working capital bridges the gap between the production process and the collection of cash from the sale of the item. Net working capital consists of current assets on the balance sheet including cash and cash equivalents, other short-term investments, net accounts receivable, inventory, and other current assets such as pre-paids, minus current liabilities such as accounts payable, current accruals, and short-term financing.

Working capital management involves making sure a company has enough cash to pay for its expenditures as they come due. Candidates will need to be familiar with working capital as a concept, the required levels of working capital for a company, and be able to determine the effect a specific transaction will have on the company's working capital. Working capital management also involves the management of each component of working capital.

Collecting the cash owed to the company as quickly as possible and paying the cash owed to others as slowly as possible are both part of working capital management, so candidates need to know the ways to speed cash collections, slow cash disbursements, and calculate the effective interest rate imputed by not paying within a discount period and thus not receiving the discount.

The Operating Cycle and the Cash Cycle

Working capital finance concerns the optimal level, mix, and use of current assets and current liabilities used in day-to-day operations. Working capital is one of the measures of a company's short-term liquidity, which is its ability to pay liabilities as they become due. The amount of liquidity a company needs depends on the length of its operating cycle.

The **operating cycle** of a company is the amount of time between the acquisition of inventory and the receipt of cash from the sale of the inventory. It is the average number of days inventory is held before it is sold plus the average number of days accounts receivable remain outstanding before being collected. It represents the total number of days the firm has funds invested in working capital.

Operating Cycle = Days' Sales in Receivables + Days' Sales in Inventory

The **cash cycle** (or net operating cycle or cash conversion cycle), is the length of time it takes to convert an investment of cash in inventory back into cash, recognizing that some purchases are made on credit. The cash conversion cycle represents the number of days from the time the firm pays for the inventory until it receives cash from the sale of the inventory. Thus, the cash cycle is the time between the **payment** for the inventory and the receipt of cash from the sale of the inventory.

Cash Cycle = Operating Cycle − Days' Purchases in Accounts Payable

Since the operating cycle is Days' Sales in Receivables + Days' Sales in Inventory, the cash cycle is also:

Cash Cycle = Days' Sales in Receivables + Days' Sales in Inventory − Days' Purchases in Accounts Payable

In a large company, a small reduction in the cash cycle can increase pretax profits significantly because of the lowered costs of financing.

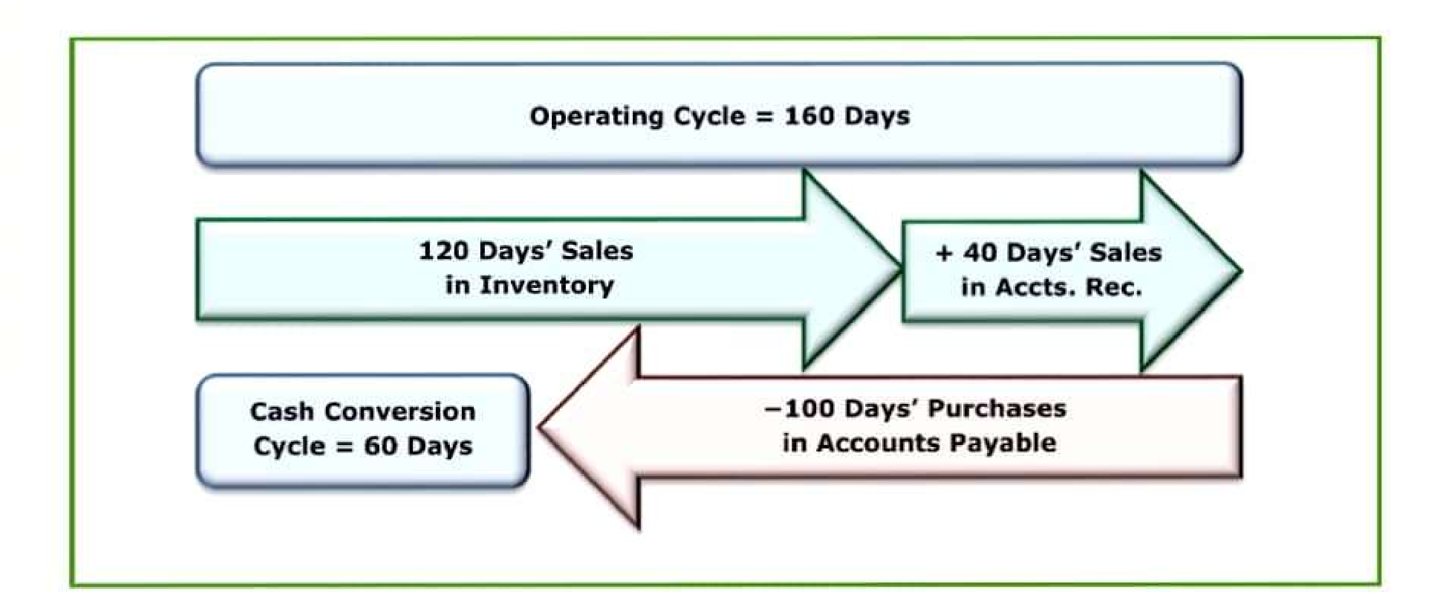
Note: The difference between the operating cycle and the cash cycle is the number of days of sales in payables.

Example of calculations of the operating cycle and the cash conversion cycle:

A company has inventory with an average age of 120 days, accounts payable with an average age of 100 days, and accounts receivable with an average age of 40 days.

The **operating cycle** is the number of days' sales in accounts receivable plus the number of days' sales in inventory. In this example, the operating cycle is 40 + 120 = 160 days.

The number of days in the **cash conversion cycle** is calculated as follows: Inventory is held for an average of 120 days prior to sale, but the average age of accounts payable is 100 days. Therefore, the average time between the cash outlay for inventory and the sale of the inventory is 20 days (120 days minus 100 days). Receivables are collected an average of 40 days after the sale. Thus, the length of the cash conversion cycle is 60 days (20 days plus 40 days). The cash conversion cycle can also be calculated as 120 plus 40 minus 100, which equals 60 days, or simply the operating cycle of 160 days minus the number of days of purchases in accounts payable of 100 days, which also equals 60 days.



Note: Some companies may have **negative cash cycles**. A company that manufactures its product on demand and requires its customers to pay by credit card before it ships can have a negative cash cycle if it is granted terms from its own suppliers. The company's days' sales in receivables are basically zero, its days' sales in inventory are very low since it manufactures product only on demand, and its days' purchases in payables are probably the highest number of all three. That situation can create a negative cash cycle.

If a company has a negative 50 day cash cycle, for instance, it means the company converts each sale to cash 50 days **before** it needs to pay the invoices from its suppliers for the cost of the sale. **Having a negative cash cycle is a very favorable position for a company to be in.**

Working Capital

Working capital or, more accurately, net working capital is the difference between current assets and current liabilities. A company's net working capital bridges the gap between the production process and the collection of cash from sales. Working capital is calculated as follows:

Net Working Capital = Current Assets – Current Liabilities

Components of net working capital include current assets on the balance sheet such as cash and cash equivalents, other short-term investments, net accounts receivable, inventory, and other current assets such as prepaids, net of current liabilities such as accounts payable, current accruals, and short-term financing.

Managing Working Capital

The objective of working capital management is to minimize the cost of maintaining sufficient liquidity (access to cash) while at the same time guarding against the possibility of financial insolvency (lack of money and inability to pay liabilities as they become due) by having enough current assets on hand.

Working capital management is a process of balancing two different goals.

1) Management must be certain that the company has enough cash and other current assets to be able to settle its current liabilities as they come due. While not being able to pay liabilities as they come due (occasionally paying late, for example) does not force a company into bankruptcy, it does place the company in a position of technical insolvency. If technical insolvency is not remedied, a repeated pattern of not paying liabilities as they come due may lead to bankruptcy proceedings being started against the company. At the very least, a pattern of late paying will cause the company to lose its credit privileges with its vendors and it will then be forced to pay cash in advance for purchases. In meeting this first goal, **the company must be certain that it has enough cash and other current assets.**

2) On the other hand, current assets (cash, receivables, inventory) provide very little return, if any, to the company, and the company does not want to lose potential profits by holding too many current assets. Long-term assets would provide a higher return to the company, but they would tie up investment cash so it cannot be used to pay current liabilities. Therefore, in meeting this second goal, **the company must be certain that it does not have too much invested in current assets.**

Therefore, holding current assets creates an opportunity cost for the company, because the current assets cannot be used to provide the higher return that long-term assets provide.

The process of managing working capital (as well as each element of working capital) involves balancing the risk of insolvency with the opportunity cost of holding current assets. The company wants to have enough current assets to be able to settle its liabilities as they come due without holding too much in current assets, because there is very little return from holding current assets.

Types of Working Capital

Because a company may have different cash needs throughout the year, the company may maintain different levels of working capital at different times of the year. The minimum amount of working capital maintained at all times to support the firm's day-to-day sales and activities is called **permanent working capital**, and the increases that occur from time to time are called **temporary working capital**.

Example: A company in a seasonal business will build up inventory in advance of its big selling season. During and immediately following the selling season, accounts receivable will increase until the customers pay their invoices. The amount of increase in inventory and accounts receivable is temporary working capital. After the selling season is over, the additional inventory has been sold, and the additional accounts receivable have been collected, the balances of current assets will revert to their permanent, ongoing, levels.

Levels of Working Capital

Management's decisions about the company's level of working capital constitute a risk-return trade-off.

- A company that adopts a **conservative working capital policy** seeks to minimize liquidity risk by increasing the amount of working capital it holds, which increases its current ratio (current assets divided by current liabilities). As a result, the company gives up the potentially higher returns available from using some of the working capital to acquire long-term assets, but it is in a safer position with respect to liquidity and possible insolvency because of the greater amount of working capital.
- An **aggressive working capital policy** reduces the amount of working capital and the current ratio, preferring to increase its investment in long-term assets. A company pursuing an aggressive working capital policy accepts a higher risk of short-term cash flow problems in exchange for a greater return on investment. A company with an aggressive policy will have a very low level of working capital but will also have a higher amount of return on its assets.

It is even possible for a company to have **negative working capital** where current liabilities are greater than current assets. A company can have negative working capital if it maintains minimal accounts receivable and inventory while receiving terms from its suppliers that allow it to delay payment of its accounts payable. For example, a company that sells its product for cash or credit card payments and produces the product on demand to fulfill orders after they have been received will have very little in accounts receivable and inventory.

Short-term Financial Forecasts

Because of the importance of working capital and the need to always be able to pay liabilities as they come due, it is critical for a company to have accurate short-term financial forecasts. These forecasts will need to project cash inflows and outflows, inventory purchases and uses, and expected changes in receivables balances (which impact cash inflows). If a company has accurate forecasts, it will know in advance of any times of expected cash shortages. By knowing ahead of time about any periods when it will need to borrow cash for short-term needs, the company can either change some of its decisions about cash usage, or arrange for the most cost effective type of short-term borrowing. Being able to accurately project working capital 6-12 months into the future is an important part of being able to effectively manage working capital.

Changes to Working Capital

A company may **increase** its net working capital by:

- increasing current assets and/or
- decreasing current liabilities.

Conversely, a company may **decrease** its net working capital by:

- decreasing current assets and/or
- increasing current liabilities.

Effect of Different Transactions on Working Capital

Because net working capital is total current assets minus total current liabilities, only transactions that **change the relationship** between current assets and current liabilities will change net working capital.

Transactions in which one current asset is exchanged for another current asset have **no effect** on net working capital. The collection of an account receivable is an example of this type of transaction because it simply increases one current asset (cash) and decreases another current asset (the receivable) by the same amounts.

A transaction in which both current assets and current liabilities are increased (or decreased) by the same amount is another type of transaction that **does not affect** net working capital. For example, if a company purchases inventory on short-term credit, the current assets of the company will increase by the cost of the inventory and its current liabilities will increase by the same amount. Similarly, the payment of the payable will not affect working capital because both a current asset (cash) and a current liability (payables) are reduced by equal amounts.

However, whenever current assets and current liabilities are both increased or decreased by the same amount, the working capital **ratios** (for example, the current ratio and the quick ratio) **will** change even though net working capital does not change.

The main transaction that causes an increase in the level of net working capital is the sale of inventory. Because the inventory is sold for more than its cost (gross profit is the difference), the receivable created or the cash received (the amount by which current assets increase because of the sale) is greater than the carrying value of the sold inventory (the amount by which current assets decrease because of the sale). As a result, current assets and net working capital both increase by the amount of the gross profit.

Components of Working Capital

Management of the current asset components of working capital is critical because a company must balance the need for liquidity with the desire for earning a return on assets.

The main classifications of assets included in current assets are:

- Cash and cash equivalents
- Current marketable securities
- Accounts receivable
- Inventory

Note: **Prepaid expense** is also classified as a current asset. A prepaid expense is money the company has paid for something it has not yet received. Prepaid expenses are not covered in specific detail as a part of working capital because a prepaid cannot be liquidated to pay current liabilities. However, prepaid expenses are current assets and therefore they are a part of the calculation of net working capital.

Study Unit 18: A.5. Cash Management

Cash Management

Cash management is one of a company's most critical processes. If a company does not have enough cash at any one point in time it will face, at worst, bankruptcy (if the situation continues for a long period of time) or at least high interest charges to obtain the necessary cash from a bank on short notice. Therefore, a company needs to manage its cash from both a short-term and a long-term perspective. In the short-term, the company must have enough cash to pay its obligations as they come due; and in the long-term, the company must have enough cash to grow and expand as needed.

The topic of cash management focuses primarily on the short-term issues. The amount of cash a company will hold at any one point in time is influenced by several factors, including:

- **How much** cash will be needed in the near future. The level of cash needed is affected by the speed with which inventory is sold and accounts receivable are collected.
- The **amount of risk** a company is willing to take in respect to liquidity.
- The level of **other short-term assets** the company holds, and how quickly they will be converted into cash.
- The **available return on other short-term investments.** If the interest rates available on other investments are very low, the opportunity cost of holding cash is reduced, and the company will hold more cash. However, when interest rates are higher, the opportunity cost of holding the cash rather than short-term interest-earning investments increases and as a result, a company may be willing to accept more solvency risk by holding less cash in return for more interest received.
- At **what point in its operating cycle** the company is. For example, if a business is a seasonal business, it will have more cash following a peak period than it will during a slow period.

Reasons for Holding Cash

The reasons that a company holds cash are many and varied. However, the reasons for holding cash can be classified in the following categories:

1) As a **medium of exchange** for business transactions. Cash is still needed for some business transactions.
2) As a **precautionary measure.** Cash or other very liquid investments may be held for use in unforeseen situations where cash is needed quickly.
3) For **speculation.** Cash may be held to be able to act quickly on good investment opportunities that arise such as an acquisition of another company or something simpler like the purchase of inventory at a deeply discounted price.

Cash Flow Forecasting

The level of cash needed is determined by the speed with which inventory is sold and accounts receivable are collected.

- Greater lengths of time required for accounts receivable and inventory to be converted into cash indicate the need for a higher level of cash.
- Short-term financial forecasts are needed so managers can project what the company's short-term cash position will be and determine whether it will have excess funds to invest or will need to borrow and if so, how much, when, and for how long.
- The cash that will be needed to make scheduled loan payments needs to be planned for, as well.

A cash flow forecast is used to show the planned sources and uses of cash for the forecast period. Some of the information for a cash flow forecast may come from the master budget for the period, such as cash requirements for planned equipment purchases. However, much of the information will come from data on current and projected sales, required inventory levels to meet current demand (using an estimated number of days of inventory required), the estimated number of days required to collect accounts receivable, and the estimated number of days the company will take to pay its payables.

An example of a short-term cash forecast follows.

Cash Forecast – Month of June 20X2	
Cash balance, beginning	$
Plus: receipts	
Collections from customers	
Sale of capital equipment	
Other receipts	
Interest income	________
Total cash available	
Minus: disbursements	
Accounts payable disbursements – inventory	
Accounts payable disbursements – other	
Payroll	
Manufacturing overhead costs	
Nonmanufacturing costs	
Capital equipment purchases	
Taxes paid	
Other disbursements	________
Total disbursements	
Minimum cash balance desired	________
Total cash needed	________
Cash excess (deficit)	$
Effects of financing:	
Beginning borrowings	$
New borrowings needed	
Principal repayment(s) during period	
Interest expense paid	________
Total effects of financing	$
Cash balance, ending	$

Cash Flow Management

The two key day-to-day goals in respect to cash management are to:

1) Collect cash as quickly as possible (cash inflow management), and
2) Delay the payment of cash for as much time as possible (cash outflow management).

Cash Inflow Management – Collecting Cash as Quickly as Possible

A company should always endeavor to receive its cash payments as soon as possible to maximize its cash management position. The following measures can help to expedite cash inflows, thereby minimizing collection float (the collection of receivables):

- **Invoices should be mailed or transmitted electronically as soon as possible** under the terms of the sales agreement so that they can be paid as soon as they are due.
- The payment terms for credit should be such that they **encourage prompt payment**. Giving a discount if the invoice is paid before the due date may achieve this. (This is discussed in greater detail in cash outflow management.)
- **Electronic data interchange** (**EDI**) is the process of using computers from two different companies to communicate directly for common transactions. **Electronic funds transfer** (**EFT**) is a form of EDI that is very commonly used. **Wire transfers** may also be used to speed collection from customers.
- **Accepting credit cards** (Visa, MasterCard, Discover, and American Express, for example) can be used as a method of speeding up collection rates. The merchant pays a fee equal to 1%-3% of the credit card sale but receives the remaining 97%-99% usually the day after the sale. The responsibility for collection (and the associated risk of non-collections) is transferred to the customer's credit card issuing bank in exchange for the fee the issuing bank receives.

Cash Outflow Management – Delaying the Payment of Cash for as Much Time as Possible

The main tool a company can use is to make payments as **close to deadline** requirements as possible, unless taking a cash discount is beneficial.

To more closely control the date when funds will be deducted from the company's bank account, the company can make payments to vendors by electronic funds transfer instead of writing checks and mailing them.

Payment can be made by credit card if doing so would not incur interest or other fees, that is, if the vendor agrees to accept credit card payments without charging a fee, and if the credit card issuing company offers a grace period to pay the monthly statement balance without an interest charge, and the credit card payment can be made within the grace period.

Discount Periods Offered by Suppliers

Suppliers may offer their customers a discount for prompt payment. If a vendor offers such a discount, it will be shown on the invoice in the "Terms" field. For example, a vendor may offer terms of 30 days from the date of the invoice to pay the invoice in full, but it also may offer a 2% discount for payment within 10 days of the invoice date. The terms on the invoice would read "2/10, net 30." If the company pays the invoice within 10 days, it can deduct 2% of the invoice amount from its payment.

When a company has an opportunity to pay a vendor's invoice within a discount period and pay less, it is generally beneficial for the company to pay within the discount period and take the discount. Payment should be made within the discount period if taking the discount results in a lower cost of funds than not taking the discount.

The calculation of the cost of not taking the discount for prompt payment is outside the scope of the exam.

Study Unit 19: A.5. Accounts Receivable and Payable Management

Accounts Receivable Management

Accounts receivable represent money that customers owe to the company for goods or services they have received on credit. Companies carry accounts receivable because it is not realistic to expect customers always to pay cash for their purchases. In addition, companies need to match what their competitors are doing. If all the companies in an industry carry accounts receivable and give terms of, for instance, 2/10, net 30, a company requiring cash payment would not do much business. Thus, most firms must carry accounts receivable to maintain their sales in a competitive environment.

On the other hand, carrying accounts receivable creates costs. Administrative costs of carrying accounts receivable include managing and monitoring the receivables and following up on delinquent accounts. Cash not received represents an opportunity cost, because the firm is not able to invest the cash or use the money owed it until it receives payment from its customers. Furthermore, the firm may incur not only an opportunity cost but also a direct cost if it grants credit to a customer who does not pay the bill at all.

To manage accounts receivable, a company must balance the level of receivables outstanding and the amount of credit losses resulting from the receivables that it will be unable to collect. The company must balance the trade-off between the **benefits** of credit sales (additional sales that would not be made if only cash sales were accepted) and the **costs** of carrying and collecting the corresponding accounts receivable (collection costs, foregone interest on uncollected balances, credit loss costs). Obviously, it would be best for a company to never have credit losses, but the only way to never have a credit loss is to never make a credit sale.

The question the manager must answer is "how much credit should the firm grant and to whom"? The policies connected to its credit sales are called the credit policy of the company. The credit policy is made up of three elements:

1) **Credit standards** determine to whom the company grants credit. Relaxed standards mean that the company gives credit to more customers that may have a higher risk of default, leading to increased sales but also increased credit losses. Strict standards mean that the company gives credit only to those with a very low risk of default. Credit losses will be lower, but sales will also be lower.

   Note: Some companies use a system of **credit scoring** to manage their credit policies and extend credit only to creditworthy customers. In a credit scoring system, a potential customer is graded against specific criteria, and they get points for meeting certain criteria. The "score" that a potential customer receives then determines whether it will receive credit.

2) **Credit terms** include the terms of sale, including the payment period allowed, whether a discount is offered for early payment or a penalty is assessed for late payment, and the size of any discount or penalty. Offering a discount for early payment may encourage faster collections and charging a penalty for late payment may discourage late collections.

3) **Collection efforts** are the amount of time and money spent on trying to collect past due accounts before writing them off as credit losses. More aggressive collection efforts should result in lower accounts receivable balances outstanding and fewer credit losses but also higher collection expenses.

Relaxing credit standards will cause sales to increase, which is a benefit. But relaxing credit standards also increases costs because credit losses will increase as less creditworthy (riskier) customers receive credit. The decision is a cost/benefit tradeoff. The goal is to extend credit up to the point where the benefits no longer outweigh the costs.

Therefore, a balance between accounts receivable and credit loss expense must be reached. If a company does not make any credit sales it will not have any credit losses. However, if it makes no credit sales, the company may be losing revenue because of lost sales.

Any action that changes any of the three elements above will have both costs and benefits.

- The benefits may be in the form of increased sales revenues (as would result from the relaxation of credit standards), or the reduction of opportunity costs due to lower accounts receivable balances, fewer credit losses, or lower collection expenses (that would result from tighter credit standards).
- The costs may include lost sales revenue (from stricter credit standards), increased discounts taken (a cost of collecting the receivables sooner), or the opportunity cost of higher accounts receivable balances, higher credit losses, or higher collection expenses (that would result from relaxation of credit standards).

Impact of a Change in Credit Policy Variables

If the credit standards are relaxed (changed so that more customers qualify to obtain credit), sales will increase, but credit losses and collection costs will also increase because more credit sales will be made to customers with worse credit histories (that are therefore a higher risk). In other words, as the credit standards are relaxed and more people obtain credit, the default risk increases.

Note: **Default risk** is the risk that a receipt of money due in the future may not be received, causing a loss.

Conversely, a change to stricter credit policies will have the opposite effect: lower levels of accounts receivable and fewer credit losses but also lower levels of credit sales.

Changes in credit terms and/or interest charged on unpaid balances (if the firm charges interest on unpaid receivable balances, and some do) will also impact the number of customers who will apply for credit to make purchases. A lower interest rate on the credit or a longer time to pay will cause more customers to buy on credit, increasing sales. However, if the interest rate is low, it is possible that some customers who would have purchased an item for cash will instead choose to purchase the item on credit. If that occurs, the level of sales may not change, but the amount of credit losses will increase—not a very good situation for the company as risk is increased without a corresponding reward.

Increased collection efforts will decrease working capital requirements and credit losses but will increase collection costs, whereas a more lenient collection policy will decrease collection costs but will increase working capital requirements and credit losses.

Thus, the credit policies used will greatly impact the level of sales (including the balance between cash and credit sales), credit losses, interest revenue, cash flows and other determinants of the company's financial picture.

Factoring of Receivables

When a company factors its receivables, it transfers title to its receivables by selling them to a **factor**. A factor is a commercial finance company that purchases receivables from companies.

For example, a customer owes a company $500 and it is due in 60 days. Instead of waiting for 60 days to collect the $500, the company chooses to factor (sell) the receivable now. In exchange for cash now, the company will sell its right to collect $500 in 60 days. There are costs to doing this, however, so the amount of cash that they will receive now will be less than $500. How much less depends on the market rate of interest, how much risk there is that the customer will not pay the $500 in 60 days, and what fee the buyer of the receivable charges to do this.

In essence, the selling company is borrowing money from the factor (the party buying the receivable) and paying back the loan with the amount that their customer will pay in the future.

Factoring receivables is a very common practice in many countries as it enables a company to immediately receive cash from its receivables and use the money for other purposes. The factor then collects the cash from the company's customers as its repayment for the money advanced to the selling company. Thus, a company that factors its receivables is not assuming a liability for loan principal that it will need to repay, though it will need to pay interest to the factor for the use of the money advanced until the factor collects the receivables.

Factoring is governed by a contract negotiated between the factor and the seller of the receivables. An individual factoring contract will provide that the receivables are being transferred either **without recourse** or **with recourse.** If the receivables are transferred **without recourse**, the company selling its receivables has transferred all risk of credit losses to the factor, and the factor cannot require the company to reimburse it for receivables that turn out to be uncollectible. If the receivables are transferred **with recourse**, however, the company selling the receivables retains the credit loss risk and must reimburse the factor for any receivables that are not collected.

In essence when a company factors its receivables, it is borrowing money from the factor and the loan will be repaid as the receivables are collected from the customer. The company agrees to pay a fee (called a **factor's fee**) and **interest** on the amount that has been borrowed. The amount of the factor's fee and interest will be determined by the amount of risk the lender is taking on. If the receivables are factored without recourse, the lender has more risk. The factor will analyze the creditworthiness of the customers who owe the receivables offered by the borrower to estimate their collectibility. Additionally, the factor's fee and/or the interest rate will be higher than if the factoring was done with recourse.

The calculations of how much interest is charged, the amount of the factor's fee, and how much cash the seller will receive is outside the scope of the exam.

Although the amount the company receives from factoring its receivables is less than it would have received if it had held the receivables to maturity and collected them itself from its customers, factoring may offer a benefit because the factor assumes responsibility for any collections activity necessary to collect the amounts owed. In addition, if the factoring contract provides that the sale is without recourse, the selling company transfers to the factor the risk of credit losses from uncollectible receivables.

Accounts Payable Management

The accounts payable cycle involves issuing purchase orders to obtain items and services in a timely manner at the lowest price consistent with the quality required, validating goods received, receiving vendor invoices, and approving final payments. The cycle begins with a request for goods or services and ends with payment to the vendor for the goods or to the provider of the service.

The steps in the process are:

1) An internal purchase requisition is prepared by the requesting manager or department. The request should be prepared by a person with the authority to do so.

2) The request is submitted to the purchasing department. In an automated system, the request may be submitted electronically.

3) The purchasing department selects the vendor, prepares a purchase order, and transmits the purchase order to the vendor. Purchase orders should be approved by a person with the authority to do so.

4) The purchasing department also transmits the information from the purchase order to the company's receiving department so it will have the record of the order when the order is received.

5) When items are received, the receiving department creates a receiving report of the items received and the quantities received. As a control, the information to which the receiving department has

access should not include the quantities ordered of each item. Thus, the receiving clerk must physically count and record the items received for the receiving report, rather than simply assuming the quantities ordered were the quantities received and marking them as such. In an automated system, the receipt of the items is input into the system and the receiving report is generated electronically. The receiving report goes to the accounts payable group in the accounting department.

6) The accounts payable group posts transactions in the accounting system to increase the records of on-hand inventory for each item received, increase the balances of the affected inventory subsidiary ledger accounts, and increase the inventory control account in the general ledger by the cost of the items. The balances in the vendor's accounts payable subsidiary ledger account and the accounts payable control account in the general ledger are also increased by the cost of the items. If an automated accounting system is in use, these transactions may be created automatically when the receiving report is generated, but they should be checked by accounting personnel.

> **Note**: Items shipped FOB shipping point belong to the purchaser as soon as they are shipped. Items shipped FOB shipping point that have been shipped but not yet received as of a financial statement date should be accrued as payables and the items should be included in ending inventory.

7) The invoice received from the vendor is compared with the purchase order and the receiving report. A packing slip and a bill of lading from the freight carrier may also be received and they should be included in the review to validate the invoice. Any differences in the items, quantity, and prices between and among the purchase order, receiving report, invoice, packing slip, and bill of lading should be investigated. If an automated accounting system is being used, a discrepancy report may be generated that notes differences in items, quantities, or amounts on the purchase order, the receiving report, and the vendor's invoice or duplicate invoice numbers or duplicate amounts to a vendor.

8) The review should also include checking for duplicate invoices, so the same invoice is not paid more than once. If an automated accounting system is in use, this review should be a built-in control in the system. For example, if an invoice is input that matches one from the same vendor with the same invoice number or amount that has already been paid, it should be flagged for investigation before payment.

9) After the review is complete and the invoice is deemed correct, the invoice should be approved for payment by a person with the authority to do so before it is paid.

10) If the item "received" was a service, approval should be received from a manager above the level of the requesting manager before payment is prepared and sent. The higher-level approval is a control to limit the opportunity for a manager to create a fictitious company, give fictitious service business to that company, and approve payment to be sent to that company—payment that is sent to him- or herself.

11) After the invoice has been approved, payment is prepared and sent. The payment may be sent as a paper check or by electronic funds transfer (EFT) through the automated clearing house (ACH) whereby the funds are deducted from the purchaser's bank account and sent electronically to the vendor.

12) Transactions are posted to the accounting system to decrease the balances in the subsidiary accounts payable account(s), the accounts payable control account in the general ledger, and the cash account in the general ledger.

13) Petty cash or procurement cards may be used for smaller purchases.

Cash Outflow Management – Delaying the Payment of Cash for as Much Time as Possible

Disbursement float occurs when a company writes a check, and it is the time between when the check is written and when the money is taken out of the company's account. The check may be mailed, and when the payee receives it, the payee deposits it in its bank. After the check has been deposited in the payee's bank, it may take a day before the money is deducted from the payer's account, because the check needs to go through the clearing system.

Thus, like collection float, disbursement float consists of

- **Mail** float (time for the check to be delivered through the mail),
- **Operational** float (time for the payee to record the payment and deposit it in its own bank), and
- **Clearing** float (time for the check to clear and be deducted from the payer's bank account).

Disbursement float may be thought of as the difference between what is in the company's bank account according to the company's books and what the bank shows to be in the account. The difference arises as the result of uncleared checks.

As opposed to cash inflows, a company should slow its cash disbursements to increase the amount of time it has the cash in its account. The delay in the money being taken out of the payer's account effectively creates an **interest free loan** in the amount of the payment for the period from the time the funds are received by the payee and credited to the payee's bank account until they are deducted from the payer's bank account.

To increase the disbursement float and slow the payment of cash, the main tool a company can use is to make payments as **close to deadline** requirements as possible, unless taking a cash discount is beneficial.

- To more closely control the date when funds will be deducted from the company's bank account, the company can make payments to vendors by electronic funds transfer instead of writing checks and mailing them.
- Payment can be made by credit card if doing so would not incur interest or other fees, that is, if the vendor agrees to accept credit card payments without charging a fee, and if the credit card issuing company offers a grace period to pay the monthly statement balance without an interest charge, and the credit card payment can be made within the grace period.

Discount Periods Offered by Suppliers

Suppliers may offer their customers a discount for prompt payment. If a vendor offers such a discount, it will be shown on the invoice in the "Terms" field. For example, a vendor may offer terms of 30 days from the date of the invoice to pay the invoice in full, but it also may offer a 2% discount for payment within 10 days of the invoice date. The terms on the invoice would read "2/10, net 30." If the company pays the invoice within 10 days, it can deduct 2% of the invoice amount from its payment.

When a company has an opportunity to pay a vendor's invoice within a discount period and pay less, it is generally beneficial for the company to pay within the discount period and take the discount. Payment should be made within the discount period if taking the discount results in a lower cost of funds than not taking the discount.

The cost of **not** taking a discount that is offered for early payment is calculated as follows:

$$\text{Cost of not taking the discount} = \frac{365}{(\text{Total Period for Payment} - \text{Period of Discounted Payment})} \times \frac{\text{Discount \%}}{(100\% - \text{Discount \%})}$$

Note: The default number of days in a year to use on the CMA exam is 365. If a question requires the use of 360 days instead, the question will clearly say to use 360 days.

The cost of not taking the discount arises because the company has two options: (1) it can pay the money early, take the discount, and pay less money; or (2) it can wait until the full amount is due and pay it then but pay more money (the full amount due). The difference between the amount paid early and the amount paid later can be considered "interest" charged for paying later. The above formula **approximates** the annualized interest rate for the "interest" charged because of paying later.

If the cost of not taking the discount is higher than the company's cost of capital, the company should take the cash discount and pay within the discount period. The cost of not taking the discount is generally greater than the company's cost of capital, so making the payments within the cash discount period is advantageous.

An example follows.

Example: Organics, Inc. receives an invoice from a supplier in the amount of $100 with terms of 3/10, net 30. The terms mean if Organics pays within 10 days, it will receive a 3% discount but if payment is not made within 10 days, then the entire amount is due in 30 days. (The discount percentage, the discount period, and the total period for payment will vary with different vendors, but their meaning and use in the formula are unchanged.)

The annualized cost to Organics of not taking this vendor's discount is 56.44%, calculated as follows:

$$\text{Cost of not taking the discount} = \frac{365}{(30 - 10)} \times \frac{3\%}{(100\% - 3\%)} = \underline{\mathbf{56.44\%}}$$

The company has $200 in its bank account when the invoice is received (March 31). The company can earn interest on its unused cash balances at the rate of 3% per annum. The two options the company has are to pay in 10 days on April 10 or to pay in 30 days on April 30.

The company pays on April 10:
If Organics pays on April 10, it will pay $97 on that date, leaving $103 in the bank (200 − $97). Therefore, Organics will earn interest on $200 for 10 days, then interest on $103 for 20 days and still have $103 in the bank in cash not counting the interest earned. Under this scenario, the company will have $103.33 in the bank at the end of the month (using a 365-day year to annualize the interest amounts):

Interest on $200 for 10 days ($200 × 0.03 ÷ 365 × 10)	$ 0.16
Interest on $103 for 20 days ($103 × 0.03 ÷ 365 × 20)	0.17
The $103 in cash	103.00
Total − money in the bank	**$103.33**

The company pays on April 30:

If Organics pays on April 30, it will pay $100 on that date. Therefore, the company will earn interest on $200 for 30 days. Under this scenario, the company will have $100.00 left in the bank plus $0.49 in interest at the end of the month:

Interest on $200 for 30 days ($200 × 0.03 ÷ 365 × 30)	$ 0.49
The $100 in cash	100.00
Total − money in the bank	**$100.49**

If Organics pays on April 10, it will have $2.84 more in the bank at the end of the month than it would have had if it had paid on April 30 ($103.33 minus $100.49). Therefore, Organics should take the discount.

(continued)

At an interest rate of 56.44% earned:

Making the same calculations using 56.44% as the interest rate earned on cash illustrates that 56.44% is the interest rate at which Organics would be indifferent between paying early and taking the discount or waiting to pay until the due date, because at an interest rate of 56.44%, the total amount in the bank at the end of the month would be the same—$109.28—whether the company pays on April 10 or on April 30.

The company pays on April 10:

Interest on $200 for 10 days ($200 × 0.5644 ÷ 365 × 10)	$ 3.09
Interest on $103 for 20 days ($103 × 0.5644 ÷ 365 × 20)	3.19
The $103 in cash	103.00
Total – money in the bank	**$109.28**

The company pays on April 30:

If the company could earn 56.44% interest on its cash for 30 days, and if it paid on April 30, the two choices would be equal.

Interest on $200 for 30 days ($200 × 0.5644 ÷ 365 × 30)	$ 9.28
The $100 in cash	100.00
Total – money in the bank	**$109.28**

If the interest rate the company can earn on its cash is less than 56.44%, the company should pay early and take the discount. At an interest rate of 56.44%, the company is indifferent. If the company can earn more than 56.44% interest (which is highly doubtful), the company should pay on April 30.

Usually, paying early and taking the discount will be significantly more beneficial to the company than waiting and paying the full amount.

Study Unit 20: A.5. Inventory Management

Inventory Management

Inventory management is a critical part of working capital management for any company that produces or sells a product. If a company is a seller of finished goods or a producer of goods, inventory may well be the largest, or one of the largest, items on the company's balance sheet. Because inventory is such a large item on the balance sheet, a small incremental percentage increase or decrease in the cost of inventory can translate into a very large increase or decrease in cost of goods sold and thus in net income.

Reasons for Carrying Inventory

A company that resells goods needs to carry inventory if it needs to have goods available for customers to purchase. A retailer with a physical location where customers make purchases or an Internet retailer that fulfills orders by shipping goods to customers from its warehouse must keep inventory on hand so it will be available for purchase.

A company that manufactures products needs finished goods inventory for sale, but it must also have on hand a certain amount of raw materials and work-in-process inventory during production.

- Finished goods inventory is inventory that is available for sale, and it fulfills the same function for a manufacturer as purchased inventory does for a reseller. The manufacturer needs to have finished goods inventory on hand so it can fulfill orders.
- Raw materials inventory allows a manufacturer to be flexible in its purchasing. Without a raw materials inventory, the firm would need to buy raw materials on an as-needed basis according to its production schedule. If something were to happen that required a change in the production schedule and the firm did not have the necessary raw materials, the firm might not be able to respond to the need in a timely manner.
- Work-in-process inventory is necessary because manufacturing takes time, and work-in-process inventory consists of units that are in the process of being manufactured.

In managing inventory, the company must balance the need to have enough inventory on hand so that every time a customer wants to buy a product or raw materials are needed for production, the inventory is available. But at the same time, the company must make certain that it does not have too much inventory. Holding inventory has both cash costs and opportunity costs associated with it, so carrying excess inventory increases the company's costs.

Costs of Inventory

Because of the potential impact of inventory costs on the profit of the company, a company should work to minimize its total inventory costs. Inventory costs, including the cost of the inventory itself and the costs associated with holding inventory, are classified as follows.

1) **Purchasing costs** include the cost of the inventory itself plus any shipping-in costs. Purchasing costs can be affected by discounts for size of purchases, by missed discounts for not ordering enough to qualify for the discount, and by suppliers' credit terms.

2) **Carrying costs** are the costs of holding inventory. These costs include the costs of storing, insuring, and protecting the inventory, as well as inventory taxes and costs of obsolescence, or spoilage of inventory. Potential losses due to theft are also carrying costs.

   Additionally, there is an opportunity cost of the investment in inventory. This opportunity cost is the cost of capital, and it represents the amount of return that is lost by investing cash in inventory instead of in some other longer-term investment that returns dividends or interest. If the inventory has been financed, the opportunity cost is the cost of the interest incurred on the borrowed funds.

3) **Ordering costs** include the costs of placing an order, receiving orders, inspecting items received, recording the receipt of the inventory in the accounting system, and matching invoices received with purchase orders and receiving reports.

4) **Stockout costs** are the costs that result from lost sales when a company does not have inventory available to sell when customers want to buy it. Stockout costs include not only the lost contribution margin from lost sales, but also potentially the contribution margin from future sales that will be lost because customers who could not purchase what they needed have permanently taken their business elsewhere. Stockout costs may also include additional shipping costs to deliver quickly to the customer and the loss of customer goodwill because of the stockout.

5) **Inventory shrinkage** is the difference between the cost of the inventory as recorded on the books and the cost of inventory when it is counted physically. Inventory shrinkage can be caused by theft by employees or outsiders or errors in recording and tracking the inventory.

Lead Time, Safety Stock, Reorder Point and Average Inventory

Lead time is the amount of time a company must wait to receive the next shipment of inventory after it places an order. The longer the lead time is, the greater is the company's risk of stockouts while it is waiting to receive the order.

Safety stock is the amount of inventory the company plans to have on hand when the next shipment of inventory is due to arrive. The level of safety stock a company carries is one of its protections against stockouts.

Therefore, safety stock is a quantity of inventory that management endeavors to hold at all times. A high level of safety stock means that even if the inventory is delayed in its receipt, the company will have sufficient levels of inventory to continue to operate while it waits for the shipment to arrive.

The amount of safety stock a company needs to hold will be affected by:

1) The **variability of the lead time**.

2) The **variability of the demand** for the product.

3) The **cost of a stockout**.

The more that either the lead time or the demand varies, the more safety stock the company will need to carry to guard against stockouts in the case of unusually high demand or an unusually long lead time. If the lead time and the demand are consistent and predictable, the company can reduce the amount of its safety stock because the chance will be less that the company will need a lot of items in stock to prevent a stockout.

The higher the cost of a stockout to the company, the more safety stock the company will need to keep on hand to reduce the chances of a stockout. As an extreme example, if the company has no costs when it experiences a stockout, the company does not need to carry any safety stock, because even if it runs out of inventory completely, it will not lose anything.

The company needs to balance the **probability** of a stockout occurring and the **cost** of a stockout if it occurs against the cost of carrying enough safety stock to avoid a stockout.

The **reorder point** is the level of remaining inventory that indicates when the company needs to place an order for inventory. The reorder point is calculated as follows:

	Expected demand during the lead time (Average daily usage × average lead time in days)
+	Level of safety stock
=	**Reorder point**

The **average inventory** the company holds is the number of units ordered each time an order is placed divided by two, plus the safety stock, which is assumed to be there all the time.

$$\textbf{Average Inventory} = \frac{\textbf{Number of units ordered each time an order is placed}}{\textbf{2}} + \textbf{Safety Stock}$$

Example: A company's average lead time for widgets is 10 days, and its average daily usage of widgets is 20. The company has determined that its level of safety stock should be 100 units. The reorder point will be when inventory on hand gets down to 300 units, as follows:

Reorder point = (Average daily usage × Average lead time) + Safety Stock

Reorder point = (20 × 10) + 100 = 300 units

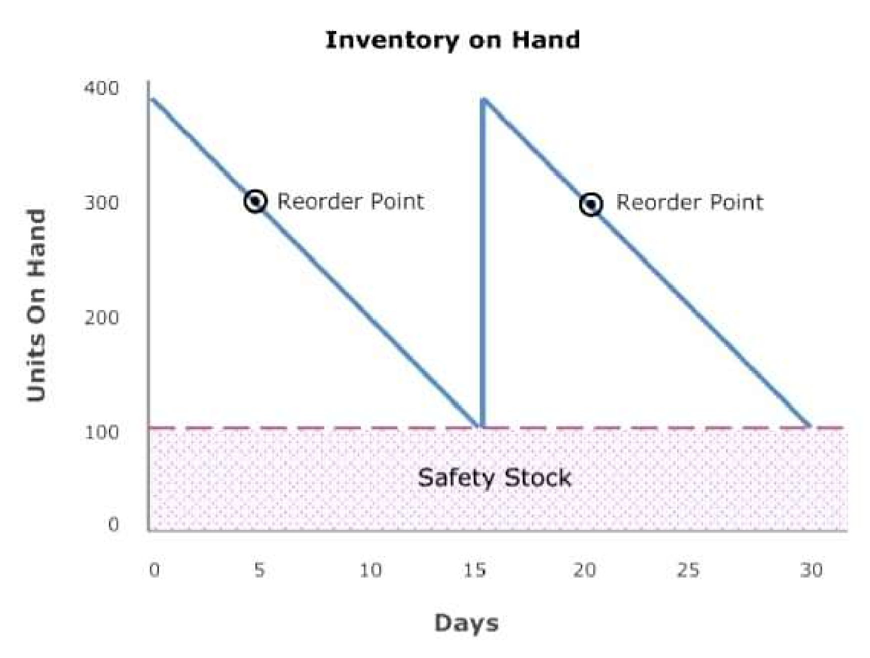
The average inventory level will be:

$$\text{Average Inventory} = \frac{\text{Number of units ordered each time an order is placed}}{2} + \text{Safety Stock}$$

If the company orders a 15-day supply each time it places an order, it will order 300 units each time (15 days × 20 units per day). Therefore, its average inventory level will be

$$\text{Average Inventory} = \frac{300}{2} + 100 = \textbf{250 units}$$

A graph of the inventory on hand for the company will be as follows, if everything takes place as planned.



However, everything will not always be as planned. There will be times when the company will need to use some inventory from its safety stock while waiting to receive a new order, and there will be times when the inventory on hand will not get down to the safety stock level before the new order is received.

Note: Each unit of the company's safety stock will increase its average inventory by one unit because both the maximum and minimum number of units that the company holds will be increased by one unit for each unit of safety stock held.

Just-in-Time (JIT) Inventory Management

JIT inventory systems are based on a manufacturing philosophy that combines purchasing, production, and inventory control into one function.

The goal of a JIT system is to minimize the level of inventories that are held in the plant at all stages of production, including raw materials, work-in-process and finished goods inventories while meeting customer demand in a timely manner with high-quality products at the lowest possible cost.

The advantage of a JIT system is reduction in the cost of carrying the inventory. The cost savings include reduction in the risk of damage, theft, loss, and a lack of ability to sell the finished goods.

One of the main differences between JIT and traditional inventory systems is that JIT is a "**pull system**" rather than a "**push system**." A JIT system responds only to actual demand, both in purchasing and in production.

Companies that use JIT manufacturing usually also implement JIT purchasing and thus purchase raw materials more frequently, in smaller quantities, and no sooner than absolutely necessary to get the materials delivered just at the time they are needed for production.

Because inventory levels are kept low in a JIT system, the company must have very close relationships with its suppliers and make certain that the suppliers can make frequent deliveries of smaller amounts of inventory in a timely manner. Furthermore, the inventory must be of the required quality because the company does not have extra inventory items on hand that can be used in place of any defective inventory items received. Therefore, a company that uses JIT purchasing must choose its suppliers carefully and maintain long-term supplier relationships.

Material Requirements Planning (MRP)

Material requirements planning, or MRP, is an approach to inventory management that uses computer software to help manage a manufacturing process. It is a system for ordering and scheduling of dependent demand inventories.

Dependent demand is demand for items that are components, or subassemblies, used in the production of a finished good. The demand for them is **dependent** on the demand for the finished good.

MRP is a "**push-through**" inventory management system. In a push-through system, finished goods are manufactured for inventory based on demand forecasts. MRP makes it possible to have the needed materials available when they are needed and where they are needed.

When demand forecasts are made by the sales group, the MRP software breaks out the finished products to be produced into the required components and determines total quantities to be ordered of each component and the timing for ordering each component, based on information about inventory of each component already on hand, vendor lead times and other parameters that are input into the software.

Once the quantities and the timing have been worked out, the required cash to pay for the components can be forecasted and arranged. MRP can be used to reduce the amount of cash needed by the organization, which in turn improves profitability and ROI. MRP creates the antithesis of the situation often found in old manufacturing organizations where large amounts of cash are tied up in inventory before products can be assembled and sold. Instead, MRP aims to decrease the amount of cash tied up through careful planning and management.

Although MRP is primarily a push inventory system, it can also be used in a "demand-pull" situation, for example if an unexpected order is received. MRP can make it possible to produce the special

order as efficiently and quickly as possible using just-in-time (JIT) inventory management techniques to determine the components to be purchased and when each should be purchased.

MRP uses the following information to determine what outputs will be necessary at each stage of production and when to place orders for each needed input component:

1) Demand forecasts for finished goods.

2) A **bill of materials** for each finished product. The bill of materials gives all the materials, components, and subassemblies required for each finished product.

3) The quantities of the materials, components, and product inventories to determine the necessary outputs at each stage of production.

The need for management accountants to collect and maintain updated inventory records is a challenge in using MRP. Accurate records of inventory and its costs are necessary. Management accountants also need to estimate setup costs and downtime costs for production runs. When setup costs are high, producing larger batches can reduce the cost because the number of setups needed is reduced, even though larger inventory carrying costs are incurred.

Section B: Financial Statement Preparation and Analysis (25%)

Study Unit 21: B.1. Asset and Liability Valuation

Valuation of Accounts Receivable

For financial statement presentation, short-term receivables are valued and reported at the **net amount expected to be collected**, also called the **net realizable value**. The amount of consideration a company expects to receive from an individual customer in exchange for transferring goods or services is the **transaction price**. The net amount the firm expects to receive in cash may be different from the amount legally receivable at any given time due to future returns and allowances, and credit losses on receivables.

Therefore, determining the net amount expected to be collected on accounts receivable involves estimation of expected credit losses on receivables.

Credit Losses on Receivables

Note: Guidance in the *Accounting Standards Codification®* on accounting for credit losses on financial instruments, including trade receivables, is in ASC 326.

Unfortunately, some of a company's receivables will not actually be collected. A credit loss may occur on a receivable because a customer goes bankrupt, an amount is disputed, or the customer simply fails to pay for some other reason. Because an asset recorded on the balance sheet should reflect the amount of future benefit the company expects to receive, it is essential that a company makes sure that its assets are not overstated. The company accomplishes this by **valuing the receivables** at each reporting date by estimating the balance of outstanding receivables that it will be able to collect in the future. This expected amount is what the company should present on the balance sheet.

A valuation account, Allowance for Credit Losses-Trade Receivables, is used to report the portion of the receivables that management estimates will **not** be collectible. The valuation allowance decreases the carrying amount of the receivables on the balance sheet in recognition of the fact that not all of them will be collected as cash. Thus, the allowance account should always have a negative (credit) balance, and, when combined with the gross accounts receivable account (which carries a positive, or debit, balance), the valuation account serves to decrease the value of net accounts receivable reported on the balance sheet.

The valuation account usually follows the accounts receivable account in the general ledger. The positive accounts receivable account balance and the negative valuation account balance combined equal the receivable amount estimated to be collectible. The estimated collectible amount is called "net receivables" and usually only the net receivables amount is presented on the balance sheet.

The estimate must be updated at each reporting date. A related credit loss expense is recorded in net income and is equal to the amount needed to adjust the allowance account to management's current estimate of expected credit losses on the financial assets.[64]

Because the allowance account is a valuation account, it is used to reduce the balance of receivables shown on the balance sheet (similar to the way accumulated depreciation reduces fixed assets). Therefore, the allowance account must carry a credit balance because it is not likely that a company will collect **more** from its customers than the customers owe them. If the details of the net accounts receivable are presented on the balance sheet, they will be presented as follows:

Accounts receivable	**$100,000**	
Less: Allowance for credit losses	**3,750**	**$96,250**

[64] Per ASC 326-20-30-1.